

STRATEGY REPORT UPDATE 1983

INPUT

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INPUT provides planning information, analysis, and recommendations to managers and executives in the information processing industries. Through market research, technical competitive analysis, management in making decisions. Consulting services are provided using computers, communications, and services.

The company carries out research. Working closely on important issues, INPUT's staff interpret the research data and make recommendations and innovations.

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Prepared For:

ANACOMP

JULY 1983



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I EXECUTIVE SUMMARY

I EXECUTIVE SUMMARY

A. INTRODUCTION

- This report is a summary update of the April 1982 study INPUT produced for ANACOMP. Forty-nine companies were analyzed in that report, and each has been reexamined for:
 - Rate of growth of revenue and net income figures.
 - Current company status (public, private, etc.).
 - Revised revenue projections.
 - Revised recommendations on desirability of purchase by ANACOMP.
- While data are provided on all 49 companies, the recommendations exclude certain companies obviously not available:
 - ADP.
 - EDS.
 - GEISCO.
 - Geophysical Services (TI).

- GEOSOURCE (Aetna Life).
- McCormack and Dodge (D&B).
- Seismograph Services Corporation (Raytheon).
- Sun Information Services (recently sold).
- TRW Information Services.
- Western Geophysical Services.
- Eight new companies have been added that INPUT believes merit ANACOMP's attention:
 - Auxco.
 - Comdata Network.
 - CyCare.
 - Hogan Systems.
 - NCSS.
 - Safeguard.
 - SEI.
 - Time Sharing Resources.

B. ACQUISITION GOAL

- The initial goal was to grow ANACOMP rapidly by acquiring large companies. However, an overview of the mergers and acquisitions in the computer services industry from 1980 to 1982, as shown in Exhibit I-1, shows:
 - A steady growth in the number of deals made.
 - A sharp decline in the size of the average purchase transaction (51% decline in 1982 following an 18% drop in 1981).
- This suggests that the majority of the large, acquirable companies have been acquired and that the smaller companies are now the main targets. It also suggests that ANACOMP may have to be content with acquisitions in the \$10-50 million revenue range and grow them.
- Buying a large company is attractive since it has a mature organizational structure, good knowledge of its market and competition, and usually a useful market reputation.
- Buying several small companies distributes the risk but also increases its degree in that management quality may be uneven and driven by short-term gain. In the latter case, purchase by ANACOMP might end that incentive.

C. RECOMMENDATIONS

- To be a leading computer services vendor, ANACOMP has to be positioned in all of the high-growth markets, including:
 - The integrated application software market (e.g., Hogan Systems).

EXHIBIT I-1

COMPUTER SERVICES INDUSTRY
MERGERS AND ACQUISITIONS
HISTORICAL GROWTH: 1980-1982

ITEM	1980	1981	PERCENT GROWTH (Decline)	1982	PERCENT GROWTH (Decline)
Total Dollar Value (\$ millions)	\$688.4	\$765.6	11%	\$435.9	(43%)
Number of Deals	87	118	36%	138	17%
Average Transaction (\$ millions)	\$7.9	\$6.5	(18%)	\$3.2	(51%)
Median Transaction	\$1.4	\$1.5	7%	\$1.2	(20%)

SOURCE: Broadview Associates

- Network services (e.g., NCSS, National Data).
 - DBMS software products (e.g., Cullinet, Information Builders).
 - Banking services (e.g., SEI, National Data).
 - Government services (e.g., BB&N, CACI).
- INPUT recommends that ANACOMP purchase medium-sized and small companies with strong management, established products, and active in high-growth markets relevant to an ANACOMP industry sector (e.g., banking).
 - Some of the companies that look expensive now may in fact be very cheap. For example, Hogan Systems (current market value \$240 million) looks expensive based on current earnings but is cheap based on 1983 planned earnings and a basement bargain based on 1984 projections.
 - Other companies (e.g., SEI) are growing rapidly toward market dominance of banking-related service submarkets (in this case trust processing services). Still others would add substantial market share in several banking application areas (e.g., Kirchman with Commercial Bank/Correspondent Bank software and Centralized Customer Information Systems or Systematics, active in both of these markets plus loan servicing).

D. LEVERAGE OF INFORMATION RESOURCES

- A significant common factor has emerged among many of the rapid growth services companies: they leverage the information resources that they require as part of the services they offer to the marketplace. For example, Transamerica offers a title insurance service that requires a data base of

property values currently covering millions of California residences. The largest single asset an individual owns is usually his house. These data plus other relevant details acquired in the process of the title insurance business form the core of a credit reporting service.

- The acid test for such leveraging operations is:
 - Does ANACOMP already acquire at least 50% of the information needed for the new service as part of current operations?
 - Will the new service materially add to the strength of ANACOMP's ongoing business (e.g., complement the services provided or add information that could be the basis for additional services?)
 - Will the new services add a new segment of customers (in one of our target industry sectors) that we do not currently reach?
 - Will the new company add distribution points we could not otherwise get? (For example, a financial manager may accept to use only one terminal on his desk; not being there first may preclude selling him service; does the new company add such "unique" distribution points?).

E. SPECIAL CASES

- Kirchman (Florida Software Services) is the archetype of the surviving private corporations that serve vertical markets and are growing very rapidly. To date, acquisition approaches have been rebuffed.
- This may make the company look unattainable, but if an imaginative approach is made, e.g., a progressive acquisition is offered (initial minority participation, gradual increase of ownership), Kirchman might consider. Certainly,

once the link is established, it would eliminate a lot of the pressure on Kirchman.

- Other companies, such as Quotron and Telecredit, have established dominant positions in their markets and look very expensive. However, it is not often that an acquiror is offered the opportunity of entering a market at the top of the stack with excellent earnings potential to boot. In this light the two companies merit review.

F. SUMMARY OF TARGET COMPANY STATUS

- The following is an alphabetical summary and recommendation on the companies updated:
 - ADVO Systems.
 - Continues rapid growth in direct mail operations but is not a pure computer services vendor. Target? Possible.
 - American Management Systems.
 - A fairly attractive company with a business mix that fits ANACOMP. Slow revenue growth and losses over the last two years. Target? Yes.
 - Applied Data Research.
 - DBMS and system software vendor. Tremendous revenue and net income growth, strong international operations. Target? Yes.

- Auxco.

- . The company is the typical size being sought by acquisition-oriented firms: accelerating growth, good net income growth, and vertical market orientation. Auxco is primarily a professional services company serving a growth market: telephone companies. Target? Yes.

- Bradford National.

- . Bradford is a company without strategic direction. It is in a consolidation phase after large losses in 1981 and marginal revenue growth in 1982. Target? Possible.

- Bolt, Beranek & Newman.

- . Schlumberger now has a 14.5% stake in BB&N, which has shown good revenue growth but uneven net income. The product and service mix is not an outstanding fit for ANACOMP, but the company is active in some interesting markets. Target? Yes.

- CACI.

- . Excellent DBMS, software, and operational research/consulting firm with good government, industry, and commercial customer base. Revenue and net income growth have been very good. Target? Yes.

- CCH Computax.

- . Despite regular sizable increases in total revenue, CCH Computax has shown uneven net income growth and a slowing in net revenue gains (i.e., revenue gain not due to price increases). Availability is not known. Target? Possible.

- Chase Econometrics/IDC.
 - . This group is as diverse in its performance as it is in its composition. Computer Power is growing well, is very profitable, and is not available. IDC is growing even faster and is also not available. Managistics is growing slowly but is available. Target? Possible.
- Cincom.
 - . The leading DBMS vendor, Cincom has shown a steady 21% per annum revenue growth. Net income is not available. Applications software markets are now being targeted. Target? Yes.
- Computer Language Research (FASTAX).
 - . CLR has growth revenue at 38% and net income at 45% over the last four years. The client base is CPA firms and Fortune 1000 corporations. Target? Yes.
- Comdata Network.
 - . The company is an interesting mix of funds transfer and credit card processing services. The revenue and net income growth has been steady and over 30%. Target? Yes.
- CSC.
 - . Parts of CSC may be available (Data Services division, Associated Credit Services) so that CSC can concentrate on its real strengths (government professional services). Growth of revenue has been slowing and net income growth has stopped. Target? Partial.

- Computer Task Group.
 - . This Fortune 500 professional services group had a poor 1982 but is fundamentally a sound company. Target? Yes.
- Comshare.
 - . After three years of worsening results, Comshare is vulnerable. Its products and services continue to be competitive because of early concentration on vertical markets. Target? Yes.
- Cullinet Software
 - . This DBMS and application software firm has had tremendous revenue and net income growth. Integration of system and application software products continues. Target? Yes.
- CyCare.
 - . 1982 was a slow growth year for CyCare due to their heavy reliance on turnkey systems. However, the company is basically sound and focused on a growing market (health care). Target? Yes.
- Digicon.
 - . Strong growth-oriented company that had a good year in 1982 in computer services but a poor year overall. The services business may not be separable. Target? No.

- Dyatron.
 - . The company is in dire straights and selling any operation that leaves the main CARS service intact. Target? No.
- FDR.
 - . The company's revenue has increased steadily over the last five years and the credit card processing service business is attractive. They are probably not available, however. Target? No.
- Informatics General.
 - . Informatics has an attractive mix of RCS, software products, and professional services, but revenue and net income growth have faltered over the last two years. It is a good fit for ANACOMP, however. Target? Yes.
- Information Builders.
 - . A rapidly developing DBMS and system software company. Though small now (\$20 million in revenue) the company expects to reach \$50 million by 1985. Target? Yes.
- Kirchman.
 - . A leader in banking application software products that is still growing rapidly (33% in 1982). Target? Yes.
- Management Decisions Systems.
 - . A single-product company, MDS sells Express (a decision support system). Ninety percent of revenue is from the U.S. Target? Possible.

- Management Science America.

- . MSA is one of the strongest application software companies in the industry and an excellent fit for ANACOMP. Revenue and net income growth have been outstanding. Target? Yes.

- NCR Data Services.

- . Sooner or later NCR will have to concentrate on its principal business: equipment manufacture. The Data Centers subsidiary is a good fit for ANACOMP, but revenue growth has been unexceptional. Net income not known. Target? Yes.

- National Data Corporation.

- . 1983 will be a flat year in revenue and net income for NDC, but this is entirely due to the ARCO contract. The company is a good fit for ANACOMP and should resume its healthy growth pattern in 1984. Target? Yes.

- NCSS.

- . National CSS had a poor 1982 and is going through a cost-cutting exercise now. The network and client base remain attractive. Target? Yes.

- Pansophic.

- . PSI is a truly international systems software company with impressive net income growth over the last two years. The customer base is very high quality, predominantly IBM based, and covers 45 countries. Target? Yes.

- PRC.

- . The company has posted a strong recovery from a bad 1981. Revenue and net income have recovered substantially. Excepting the engineering and architectural activities, the company is attractive for its government/professional services and real estate services. Target? Yes.

- Quotron.

- . A market leader in the stock and securities quotation field, the company has had excellent revenue and net income growth. Its customer base (banks, brokerage firms, and insurance companies) fits well with ANACOMP's. Target? Yes.

- Reynolds and Reynolds.

- . Now that the company has ceased trying to manufacture its own systems, it is in a recovery phase. The company has organized its shareholdings defensively, realizing that they are an acquisition target. Target? No.

- Safeguard Business Systems.

- . SBS deals with 625,000 small business accounts with one-write systems and processing services. The company revenue and net income growth have slowed, but it remains attractive. Target? Yes.

- Service Applications.
 - . SA's involvement in DOD professional services has grown to \$49 million. If this area interests ANACOMP, then they are a target. Target? Yes.
- SEI.
 - . SEI is a gem of a company whose recent development of a trust fund has netted deposits of \$1.5 billion. Resulting management fees might grow to become the main revenue source. Target? Yes.
- Shared Medical Systems.
 - . The company has shown exemplary revenue and net income growth to become the largest vendor in its field (hospital services). Target? Yes.
- Systematics.
 - . The leader in commercial banking FM services. Revenue and net income growth have been outstanding. Target? Yes.
- Syscon.
 - . Another DOD professional services company with steady revenue and net income growth. Target? Yes.
- Systems and Computer Technology.
 - . Medium-sized FM and professional services company for the education and state and local government markets. Outstanding revenue and net income growth. Target? Yes.

- Telecredit.
 - . Market leader in the check guarantee/authorization services market. Revenue and net income growth depend on consumer spending patterns but have done extremely well. Target? Yes.
- Time Sharing Resources.
 - . Typical small processing services company emerging from difficult start-up and and take-off. Revenue and net income well managed except in 1980. Target? Yes.
- Triad.
 - . Recovering from a very difficult 1982. Dependent on strength of small business sector. Very good revenue and net income growth prior to 1982. Target? Yes.
- Tymshare.
 - . The company is vulnerable and needs to concentrate on its core business (network services) and divest itself of those activities not central to its operations (credit/check verification, banking services). Target? Yes.
- UCC.
 - . UCC is another group recovering from a difficult 1982. It is doubtful that the entire group would be acquirable, but parts of the company might be separable. Target? Partial.

- Xerox Computer Services.
 - . Growth of the division has stopped. Net income is unknown, as is Xerox's attitude toward divestiture. Target? No.
- Exhibit I-2 summarizes the key data on the companies examined.

EXHIBIT I-2

SUMMARY OF-TARGET COMPANY STATUS

NAME	AAGR LAST 5 YEARS (percent)		1982 REVENUE (\$ millions)	TARGET
	Revenue	Net Income		
ADVO	15%	NK	\$62	Possible
AMS	22	NA	70	Yes
ADR	33	24%	68	Yes
AUXCO	19	27	13	Yes
Bradford National	3	(47)	135	Possible
Bolt, Beranek & Newman	23	NA	69	Yes
CACI	67	72	96	Yes
CCH Computax	26	11	105	Possible
CHASE/IDC	25	NK	133	Possible
CINCOM	21	NK	54	Yes
Computer Language Research	38	45	69	Yes
COMDATA Network	39	53	27	Yes
CSC	19	6	69	Partial
Computer Task Groups	30	21	40	Yes
COMSHARE	35	(72)	79	Yes
Cullinet Software	58	66	49	Yes
CYCARE	24	31	24	Yes
DIGICON	30	NK	70	No
DYATRON	15	NA	9	No
FDR	14	NK	67	No
Geophysical Service	34	NK	126	No
Geosource	36	NK	52	No
Informatics General	17	15	170	Yes
Information Builders	63	NK	19	Yes
Kirchman	25	NK	46	Yes
MDS	37	NK	21	Possible
McCormack & Dodge	78	NK	38	No
MSA	40	68	101	Yes
NCR Data Services	10	NK	79	Yes
NCSS	12	NK	110	Yes

EXHIBIT I-2 (Cont.)

SUMMARY OF TARGET COMPANY STATUS

NAME	AAGR LAST 5 YEARS (percent)		1982 REVENUE (\$ millions)	TARGET
	Revenue	Net Income		
Pansophic	34%	50%	36	Yes
PRC	7	29	153	Yes
Quotron	32	40	111	Yes
Reynolds & Reynolds	13	(11)	117	No
Safeguard	19	18	19	Yes
Science Applications	10	NK	49	Yes
SEI	29	44	143	Yes
Seismograph Services	10	NK	58	No
Shared Medical Systems	27	26	166	Yes
Sun Information Services	NA	NA	NA	No
SYSCON	17	17	71	Yes
Systematics	28	48	49	Yes
Systems and Computer Technology	30	47	30	Yes
TRW Information Services	10	NK	72	Possible
Telecredit	24	42	58	Yes
Timesharing Resources	28	7	12	Yes
TRIAD	54	20	82	Yes
TYMSHARE	19	(5)	297	Yes
UCC	16	NA	141	Partial
Western Geophysical	17	NK	122	No
XCS	12	NK	73	No

II COMPANY HIGHLIGHTS

COMPANY HIGHLIGHT

ADVO SYSTEMS, INC.
239 West Service Road
Hartford, CT 06101
(203) 525-9101

John A. Valentine, President
Privately Held
Total Employees: 1,200
Total Revenue, Fiscal Year End
8/30/82: \$62,000,000*

THE COMPANY

- Advo provides processing services for direct mail operations, serving such customers as Sears, Montgomery Ward, Lever Bros., etc. It has in the past worked with the U.S. government on census preparation and derives 100% of its income from the U.S.
- Advo is expanding its geographic coverage of all major U.S. markets, opening "factories" on an as-needed basis to serve its customers.

ADVO SYSTEMS, INC. FOUR-YEAR FINANCIAL SUMMARY (\$ millions)

FISCAL YEAR ITEM	1982	1981	1980	1978
Revenue	\$ 62	\$ 52	\$ 30	\$ 18
• Percent increase from previous year	19%	73%	67%	NA
Net income	-----NOT AVAILABLE-----			
• Percent increase from previous year				

PROJECTED GROWTH BY SEGMENT

	AAGR (percent)	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Processing services	15%	\$ 62	\$ 71	\$ 82	\$ 94	\$ 108

*INPUT estimate

COMPANY HIGHLIGHT

AMERICAN MANAGEMENT SYSTEMS, INC.

1777 North Kent Street
Arlington, VA 22209
(703) 841-6000

Charles Rossotti, President
Public Company, OTC
Total Employees: 850
Total Revenue, Fiscal Year End
12/31/82: \$69.6 million
Computer Services Revenue:
\$63.1 million

THE COMPANY

- AMS was founded in 1970 as a privately held corporation, and it became public in 1979. AMS offers custom systems for large businesses and state/local governments, processing, OCR and micrographics services, software products and turnkey systems for government and general business, and management consulting for federal programs.
- In 1981 AMS's growth in revenue and profit slowed suddenly, with net income showing a loss of \$0.08 million compared to a profit of \$2.2 million a year earlier. Two acquisitions were accomplished in 1981: Executive Systems (on-line processing of associations memberships) and Florida Computer Systems (property analysis and tax collection system for local government). In 1982 the loss deepened to \$1.1 million on slow revenue growth.

AMERICAN MANAGEMENT SYSTEMS, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Revenue	\$ 69.6	\$ 65.6	\$ 58.5	\$ 48.1	\$ 31.9
• Percent increase from previous year	6%	12%	22%	51%	50%
Net income	\$ (1.1)	\$ (0.8)	\$ 2.2	\$ 1.7	\$ 1.4
• Percent increase (decrease) from previous year	(38%)	N/A	25%	20%	20%

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1978</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Turnkey	\$10.9	\$22.7	20%
Software products	0.6	5.3	72
Processing services	10.8	23.7	21
Professional services	<u>3.5</u>	<u>6.6</u>	<u>17</u>
Total net revenue (i.e., less reimbursed expenses)	\$25.8	\$58.3	22%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Processing services	20%	\$24	\$29	\$35	\$ 42	\$ 50
Professional services	17	7	8	10	11	13
Software products	30	5	7	9	11	14
Integrated systems	<u>18</u>	<u>22</u>	<u>26</u>	<u>31</u>	<u>36</u>	<u>43</u>
Total company size		\$58	\$70	\$85	\$100	\$120

1986 MARKET SHARE

- All markets less than 1%.

EQUIPMENT USED

- IBM 370/155, 2 IBM 4341s, 4 DEC 2060s, DEC PDP 11/23, PDP 11/34, 5 PDP 11/70s, and VAX 11/750.
- Several leased OCR scanners, COM recorders, and laser printers.

COMPANY HIGHLIGHT

APPLIED DATA RESEARCH, INC.
Route 206 and Orchard Road, CN-8
Princeton, NJ 08540
(201) 874-9000

John R. Bennett, President
Public Company, AMEX
Total Employees: 675
Total Revenue, Fiscal Year End
12/31/82: \$68,400,000

THE COMPANY

- Founded in 1959, ADR is a leading supplier of systems software products. Originally ADR concentrated on utility products until, in 1978, it bought the DATACOM DBMS products from Insyte Corporation. ADR also supplies integrated systems, professional services, and applications software products.
- Revenue growth through the 1978-1982 period was at an AAGR of 32% and net income rose at an AAGR of 24%.
- ADR supports more than 8,000 customers worldwide in 40 countries. Project VIABLE will contribute \$14.2 million over the next 10 years. More important, software maintenance revenue contributed \$17.2 million in 1982 alone (25% of total revenue).

APPLIED DATA RESEARCH, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

FISCAL YEAR ITEM	1982	1981	1980	1979	1978
Revenue	\$ 68.4	\$ 52.3	\$ 37.1	\$ 28.7	\$ 22.6
• Percent increase from previous year	31%	41%	29%	27%	34%
Net income	\$ 4.70	\$ 3.07	\$ 0.91	\$ 0.53	\$ 1.98
• Percent increase (decrease) from previous year	53%	237%	21%	(73%)	72%

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1977</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Software products U.S.	\$7.1	\$33.2	37%
Professional services	2.9	4.3	8
Turnkey	-	0.7	N/A
Other (interest)	0.2	3.0	72
International	<u>6.7</u>	<u>26.7</u>	<u>32</u>
Total	\$16.9	\$67.9	32%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Software products	35%	\$ 33.7	\$45	\$ 61	\$ 83	\$112
Professional services	9	4.3	5	5	6	- 6
Turnkey	63	0.7	1	2	3	5
Other	30	3.0	4	5	7	9
International	<u>25</u>	<u>26.7</u>	<u>33</u>	<u>42</u>	<u>52</u>	<u>65</u>
Total company size		\$ 68.4	\$88	\$115	\$151	\$197

1986 MARKET SHARE

- Systems software products 1.2%; other less than 1%

COMPANY HIGHLIGHT

AUTOMATIC DATA PROCESSING, INC.

405 Route 3
Clifton, NJ 07015
(201) 472-1000

Josh S. Weston, President
Public Company, NYSE
Total Employees: 15,000
Total Revenue, Fiscal Year End
6/30/82: \$669,000,000
Market Value: \$1,220 million

THE COMPANY

- Formed in 1949 as Automatic Payrolls Inc., ADP ran a payroll service on unit record equipment until 1961 when it computerized operations and went public. An ambitious acquisition program brought 75 companies (approximately) into the company as well as new business areas such as remote computing, an international network, operations in finance/banking, and services to automotive dealers. Payroll and accounting still provide the major source of ADP's revenue. In September 1981 ADP acquired the payroll processing services of Crocker National Bank. In 1982 acquisitions included Allied Financial Services, National Healthcare Administrators, and parts of Computer Statistics and Rechenzentrum Frankfurt.
- Growth has been regularly over 20% until 1982 when revenue and income grew less than at any time in the last five years.

AUTOMATIC DATA PROCESSING, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

FISCAL YEAR ITEM	1982	1981	1980	1979	1978
Revenue	\$ 669	\$ 558	\$ 455	\$ 369	\$ 296
• Percent increase from previous year	20%	23%	23%	25%	23%
Net income	\$ 57.8	\$49.3	\$39.9	\$33.5	\$27.7
• Percent increase from previous year	17%	24%	19%	21%	19%

- ADP's Network Service group is the result of acquiring Cyphernetics, First Data Corporation, Time Sharing Ltd., and Information Sciences. At the time of acquisition, combined revenue was \$30 million. In 1980 it was \$68 million, 17% up on 1979. Sixty-five percent of revenue is from interactive processing and 35% from remote batch, on-site, and cash management services. The latter is a fast-growing segment, with 45 banks handling deposits of \$2 billion per day.

AUTOMATIC DATA PROCESSING, INC.

- Commercial Services has always supplied more than 50% of ADP's revenue. Services include payroll, A/R, A/P, financial statement, tax return, and unemployment insurance handling.
- Financial Services contribute 10% of revenue from securities processing, interest rate futures trading, thrift institutions, and banking services. Growth was slower than in prior years due to brokerage services and banking/thrift operations.
- The dealer services division grew over 15% in 1982, providing accounting and MIS to car, truck, construction equipment, and farm equipment dealers.

INDUSTRY SECTORS SERVED

- The principal industry sectors served by ADP are:
 - Manufacturing (discrete and process).
 - Banking and finance.
 - Distribution (wholesale and retail).
 - Utilities.
 - Medical/hospital.
 - Government.

INTERNATIONAL MARKETS SERVED

- In addition to the 45 sales offices in the U.S., ADP has 25 offices abroad, including London, Rotterdam, Paris, Sao Paulo, Frankfurt, Hamburg, Toronto, Montreal, Vancouver, and Milan. International operations contribute 9% of ADP's revenue of which 90% is from Western Europe. Almost all of these revenues are from remote computing services with the exception of batch service operations in Rotterdam, Frankfurt, and Hamburg.

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1979</u> <u>(\$ millions)</u>	<u>1980</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Commercial services	\$193	\$246	27%
Network services	58	68	17
Financial services	37	47	27
Special industries	<u>77</u>	<u>90</u>	<u>17</u>
Total	\$365	\$451	24%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>(actual)</u> <u>1982</u>	<u>Fiscal Year (\$ millions)</u>			
			<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Commercial services	23%	\$371	\$455	\$560	\$ 689	\$ 847
Network services	13	95	107	121	137	155
Financial services	11	81	90	99	110	123
Special industries	<u>22</u>	<u>122</u>	<u>149</u>	<u>181</u>	<u>221</u>	<u>270</u>
Total company size	20%	\$669	\$801	\$961	\$ 1,157	\$ 1,295

1986 MARKET SHARE

- Processing services market: 9%.

POTENTIAL IMPACT OF ECONOMY

- ADP's constant search for compatible acquisition candidates has yielded a regular increase of over 20% in revenue independent of any economy fluctuations. There is every reason to expect this pattern to continue since tight market conditions are an incentive for some of the reluctant acquisition candidates to be more reasonable in their expectations.

POTENTIAL IMPACT OF COMPETITION

- ADP is the market leader in its field with excellent management, technical, and sales teams. It will be extremely hard to dislodge ADP from the top position. No competitive impact foreseen.

POTENTIAL IMPACT OF TECHNOLOGY

- ADP has been quick to adapt to changes in technology, particularly changes in service delivery mode (e.g., on-site hardware services, ATM networks, and remote desktop payroll data entry). The company has the means to achieve such adaptations as required. No impact foreseen.

SUMMARY

- ADP will continue to be the processing services leader over the forecast period and will act as the bellwether for its market. Its management is one of the strongest in the information services industry.
- The automotive services growth is likely to moderate slightly over the forecast period, but this will be offset by the growth in their new Collision Data service, the Comtrend and Pension Services.

COMPANY HIGHLIGHT

AUXTON COMPUTER ENTERPRISES, INC.

201 East Pine Street
Orlando, FL 32801
(305) 425-3300

John P. Croxton, President
Public Corporation, OTC
Total Employees: 184
Total Revenue, Fiscal Year End
12/31/82: \$12,531,599

THE COMPANY

- Auxton Computer Enterprises, Inc. (AUXCO) was founded in 1969 as a professional services firm. While consulting remains its primary service, AUXCO also leases computer equipment and provides software products and processing services primarily to clients in the telephone industry.
- Revenue increased 19% in the period 1978 to 1982 and net income rose 27% over the same period.

AUXCO FIVE-YEAR FINANCIAL SUMMARY (\$ thousands, except per share data)

ITEM. \ FISCAL YEAR	1982	1981	1980	1979	1978
Revenue	\$ 12,532	\$ 9,662	\$ 9,041	\$ 8,078	\$ 6,335
• Percent increase from previous year	30%	7%	12%	28%	27%
Net income	\$ 790	\$ 320	\$ 413	\$ 604	\$ 302
• Percent increase (decrease) from previous year	147%	(23%)	(32%)	100%	42%

- Of AUXCO's 184 employees, 159 hold technical/consulting positions, and 25 are management, administrative, sales, and clerical personnel.

HISTORICAL GROWTH BY SEGMENT

- Virtually all of AUXCO's 1982 computer services revenue was derived from professional services. Less than 1% of revenue was from software product sales.

AUXTON COMPUTER ENTERPRISES, INC.

<u>Segment</u>	<u>1979</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Professional services	\$8.0	\$11.4	13%
Software	-	0.1	N/A
Leasing	<u>0.1</u>	<u>1.0</u>	<u>115%</u>
Total	\$8.1	\$12.5	16%

INDUSTRY MARKETS

- Approximately 69% of AUXCO's 1982 revenue was derived from the telephone industry, and 17% from the broadcasting industry. The remaining 14% of revenue was primarily from clients in the banking, brokerage, and insurance industries.

GEOGRAPHIC MARKETS

- One hundred percent of AUXCO's revenue is from the U.S., primarily the New York metropolitan area.
- Branch offices are located in Edison and Parsippany (NJ).

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Professional services	12%	\$11	\$12	\$14	\$16	\$17
Software products	40	-	1	2	2	3
Other (leasing)	<u>40</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>2</u>	<u>3</u>
Total	18%	\$12	\$14	\$18	\$20	\$23

COMPANY HIGHLIGHT

BRADFORD NATIONAL CORPORATION
 67 Broad Street
 New York, NY 10004
 (212) 530-2400

Peter Del Col, President
 Public Company, AMEX
 Total Employees: 3,100
 Total Revenue, Fiscal Year End
 12/31/82: \$134,600,000

THE COMPANY

- Founded in 1968 to provide software and systems development services to the financial market, BNC now provides computerized record keeping for the securities industry; facilities management to the financial, industry, and government sectors; and extensive trust services.
- BNC's revenue and net income growth has been very uneven. In 1981 the Systems and Administrative Services Divisions were sold to McAuto for \$11.6 million. In addition the Health Services Division leased operations as of December 31, 1982. In July 1982, 80% of Eagles National, a wholly owned subsidiary, was sold for \$4 million. Over the 1978-1982 period the AAGR of revenue was 3.2% and net income dropped 47%.

BRADFORD NATIONAL CORPORATION FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Revenue	\$ 134.6	\$ 130.6	\$ 110.1	\$ 120.1	\$ 118.7
• Percent increase (decrease from previous year)	3%	19%	(8%)	1%	26%
Net income	\$ 0.4	\$ (10.0)	\$ 4.4	\$ 5.7	\$ 4.9
• Percent increase (decrease) from previous year	N/A	N/A	(22%)	16%	28%

SERVICE TYPE AND DELIVERY MODE

- Bradford's revenue is derived from service fees and the net interest earned from customer balances on deposit at Bradford's chartered trust companies. Interest is also from advances to brokers and dealers having securities clearance activities and from investment in tax-exempt federal, state, and local obligations.

INDUSTRY SECTORS SERVED

- BNC specializes in financial transaction processing and administrative services. Insurance represents 2% of revenue, and the New York State Department of Social Securities accounts for 18%. State governments, municipal governments, and the federal government combined account for 30% of total revenue.

INTERNATIONAL MARKETS SERVED

- Not applicable.

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1981</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Service fees	\$75.5	\$90.9	20.0%
Interest revenue	<u>55.2</u>	<u>43.7</u>	<u>(21.0%)</u>
Total	\$130.6	\$134.6	3.1%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Service fees	20%	\$ 91	\$109	\$131	\$157	\$189
Interest revenue	<u>4</u>	<u>44</u>	<u>45</u>	<u>48</u>	<u>50</u>	<u>52</u>
Total company size	15%	\$135	\$154	\$179	\$207	\$241

1986 MARKET SHARE

- Not calculable.

POTENTIAL IMPACT OF ECONOMY

- The BNC business is relatively unaffected by economic downturns, other than by a reduction in the volume and value of the securities held in custody (in the case of a stock market liquidation phase). The economic impact is less important than Bradford's lack of clear strategic direction.

POTENTIAL IMPACT OF COMPETITION

- The main competition to BNC in its three major markets is:
 - Trust services: SEI Corporation.
 - Shareholder services: several banks.

POTENTIAL IMPACT OF TECHNOLOGY

- The main impact of acquired technology could be in the development by the banks of superior hardware/software systems that might seriously impact BNC shareholder services business. This cannot be forecast, however.

COMPANY HIGHLIGHT

BOLT, BERANEK & NEWMAN, INC.

10 Moulton Street
Cambridge, MA 02238
(617) 491-1850

Stephen R. Levy, President
Public Corporation, AMEX
Total Employees: 1,290
Total Revenue, Fiscal Year End
6/30/82: \$69,200,000

THE COMPANY

- Bolt Beranek and Newman, Inc. (BBN) is a consulting and research firm specializing in electronics, communications, and acoustic technologies. BBN has three wholly owned business products subsidiaries that manufacture and market instruments, minicomputers, and a new electronic mail software package. BBN derives 46% of its revenue from U.S. Department of Defense contracts with 16% of revenue coming from other U.S. government sources, principally the Department of Education.
- In 1982 BBN agreed with Olivetti to work together to develop international markets in the data communications field. Olivetti will distribute BBN's packet switching data network software products outside of North America. Also in 1982 BBN agreed to technically cooperate with a division of Schlumberger on oilfield and CAD/CAM consulting services. Schlumberger bought the 14.5% stake in BBN owned by the Soros Fund Management.

BOLT, BERANEK & NEWMAN, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Revenue	\$ 69.2	\$ 55.1	\$ 46.9	\$ 37.7	\$ 30.2
• Percent increase from previous year	26%	17%	24%	25%	14%
Net income	\$ 1.6	\$ 0.939	\$ 2.81	\$ 3.11	\$ (0.397)
• Percent increase (decrease) from previous year	70%	(67%)	(11%)	-	-

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1977</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Professional services	\$10.6	\$29.7	23%
Hardware and other	\$16.0	\$39.5	20%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Professional services	23%	\$30	\$37	\$ 45	\$ 56	\$ 69
Other	<u>20</u>	<u>40</u>	<u>48</u>	<u>58</u>	<u>69</u>	<u>83</u>
Total company size	22%	\$70	\$85	\$103	\$125	\$152

MARKET SHARE

- All markets less than 1%.

COMPANY HIGHLIGHT

C.A.C.I., INC.
1815 North Fort Meyer Drive
Arlington, VA 22209
(703) 841-7800

Herbert W. Karr, President
Public Company, OTC
Total Employees: 1,900
Total Revenue, Fiscal Year End
6/30/82: \$95,700,000

THE COMPANY

- Founded in 1962 as California Analysis Centers by RAND Corporation, developers of the SIMSCRIPT language, C.A.C.I. specializes in solving managerial, logistics, and operational problems of government (DOD), commerce, and industry through research, analysis, and computer software techniques. Market research, demographics, decision graphics, simulating, DBMS, energy, and software products are the main areas of activity.
- From 1978 to 1982 revenue grew at an AAGR of 67% and net income at 72%. This track record continued in 1982 when C.A.C.I. increased revenue 64% and net income 91%, the most successful in its history.

C.A.C.I., INC. FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Revenue	\$ 95.7	\$ 58.5	\$ 34.7	\$ 19.8	\$ 12.4
• Percent increase from previous year	64%	69%	75%	59%	21%
Net income	\$ 4.4	\$ 2.3	\$ 1.4	\$ 1.2	\$ 0.5
• Percent increase from previous year	91%	64%	9%	129%	92%

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1979</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
U.S.	\$16.9	\$85.5	72%
International	<u>2.8</u>	<u>10.2</u>	<u>54</u>
Total	\$19.7	\$95.7	69%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR (percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
U.S.	45%	\$86	\$125	\$181	\$262	\$380
International	<u>40</u>	<u>10</u>	<u>14</u>	<u>20</u>	<u>27</u>	<u>38</u>
Total company size	44%	\$96	\$139	\$201	\$289	\$418

1986 MARKET SHARE

- Five percent estimated.

COMPANY HIGHLIGHT

CCH COMPUTAX
601 N. Nash Street
El Segundo, CA 90245
(213) 772-2502

Thomas G. Rolfe, President
Subsidiary of Commerce Clearing House
Total Employees: 480 (during the tax season 5,000)
Total Revenue, Fiscal Year End 12/31/82: \$104,494,496

THE COMPANY

- Originally developed by CSC, the Computax programs formed the product offering of a separate corporate entity in 1965 and was sold to CCH in the same year. Computax is the largest provider of computerized tax return processing services to accountants, attorneys, and banking institutions.
- Over the 1976-1980 period, revenue grew at an AAGR of 26%. 1980 revenue was affected by four acquisitions: the Multi-Tax Division of United Computing, RJ Software Systems, Professional Software Consultants, and CT Law Technology. In 1981 CCH Computax Canada Ltd. ceased operations.
- Three-quarters of the revenue increase in 1982 was due to price increases and the remainder due to increased volume of tax returns processed. Turnkey systems revenue fell. CCH also acquired the tax services business of ADP in 1982 for an undisclosed cash payment and contingency payments.

CCH COMPUTAX FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Revenue	\$ 104.5	\$ 92.0	\$ 67.4	\$ 49.3	\$ 38.6
• Percent increase from previous year	14%	36%	37%	28%	18%
Operating profit	\$ 2.0	\$ 5.2	\$ 4.8	\$ 3.4	\$ 1.3
• Percent increase (decrease) from previous year	(62%)	8%	41%	162%	NA

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1979</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Processing	\$26.5	\$102.3	57%
Turnkey systems	<u>-</u>	<u>2.2</u>	<u>N/A</u>
Total	\$26.5	\$104.5	58%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Processing	20%	\$102	\$122	\$147	\$176	\$212
Turnkey systems	<u>30</u>	<u>2</u>	<u>3</u>	<u>3</u>	<u>4</u>	<u>6</u>
Total company size	20%	\$104	\$125	\$150	\$180	\$218

1986 MARKET SHARE

- Estimated 38% of the tax return processing market.

COMPANY HIGHLIGHT

CHASE ECONOMETRICS/INTERACTIVE

DATA (Computer Power,
Managistics, and Chase TCMS)
486 Totten Pond Road
Waltham, MA 02154
(617) 890-1234

Carl G. Wolf, Vice President Chase
Subsidiary of Chase Manhattan
Total Employees: 1,500
Total Revenue, Fiscal Year End
12/31/82: \$132,600,000

THE COMPANY

- In 1971 Chase Manhattan Bank purchased Chase Econometrics and in 1974, Interactive Data. These operate separately from Chase's other computer services firms: Computer Power, Chase TCMS, and Managistics. CE/IDC offers financial/economic data base services, forecasting, and consulting.
- The growth of "decision support" (securities industry, economic forecasting, corporate accounts, banking) has been significant (INPUT estimates 42%) and was even faster over the 1979-1980 period (51%). CE/IDC is expected to enter the TK market in 1983 and to grow software products rapidly through 1986.

CHASE ECONOMETRICS/INTERACTIVE DATA FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Revenue	\$132.6	\$113.7	\$102	\$67.6	\$48.3
• Percent increase from previous year	17%	12%	51%	40%	40%
Net income	-----NOT AVAILABLE-----				
• Percent increase from previous year					

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1979</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
CE/IDC	\$43.7	\$ 96.0	30%
Computer power	13.9	25.6	23
TCMS/Managistics	<u>10.0</u>	<u>11.0</u>	<u>3</u>
Total (captive and noncaptive)	\$67.6	\$ 132.6	25%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Processing	25%	\$117	\$146	\$183	\$229	\$286
Professional services	15	4	5	5	6	7
Software products	45	1	2	2	3	4
Integrated systems	65	-	2	4	7	9
International	<u>20</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>9</u>	<u>10</u>
Total noncaptive	26%	\$127	\$161	\$201	\$254	\$316

COMPANY HIGHLIGHT

CINCOM SYSTEMS, INC.

2300 Montana Avenue
Cincinnati, OH 45211
(513) 662-2300

Tom Nies, President

Privately held

Total Employees: 800

Total Revenue, Fiscal Year End

9/30/82: \$54,000,000

THE COMPANY

- Incorporated in Ohio in 1968, Cincom provides data base management, data communications and related software packages, and consulting services. The most notable package is TOTAL, the most successful DBMS other than those sold by hardware manufacturers, installed on over 2,000 mainframes and 1,500 minicomputers. Cumulative revenue since product introduction is over \$250 million. ENVIRON/I, a teleprocessing monitor, has reached 1,500 installations. CINCOM has begun to target applications software markets since they estimate that any further penetration of the systems software market would require a larger sales force.
- Revenue from 1978 to 1982 grew at an AAGR of 21%. Net income data is not available.

CINCOM SYSTEMS, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Revenue	\$54.0	\$43.0	\$35.9	\$29.6	\$24.8
• Percent increase from previous year	26%	20%	21%	19%	33%
Net income	-----NOT AVAILABLE-----				
• Percent increase from previous year					

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1980</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)*</u>	<u>AAGR</u> <u>(percent)</u>
U.S. software products	\$16.1	\$26.6	29%
International	<u>19.8</u>	<u>27.4</u>	<u>18</u>
Total	\$35.9	\$54.0	23%

*INPUT estimate

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
U.S. software products	25%	\$27	\$34	\$42	\$ 53	\$ 66
International software products	<u>23</u>	<u>27</u>	<u>33</u>	<u>41</u>	<u>50</u>	<u>62</u>
Total company size	24%	\$54	\$67	\$83	\$103	\$128

1986 MARKET SHARE

- Two percent of systems software market, 50% of the independent DBMS market.

COMPANY HIGHLIGHT

COMPUTER LANGUAGE RESEARCH (FAST-TAX)

2395 Midway Road
Carrollton, TX 75006
(214) 934-7000

Francis W. Winn, President
Public Company, OTC
Total Employees: 1,149
Total Revenue, Fiscal Year End
6/30/82: \$69,000,000
Market Value: \$345 million

THE COMPANY

- Founded in 1964, Computer Language Research provides computerized tax return processing services to individuals, corporate entities, partnerships, fiduciaries, and expatriates. Principal clients are major CPA firms, law firms, and Fortune 1000 corporations.
- From 1978 to 1982 revenue grew at an AAGR of 38%. Net income grew at an AAGR of 45% over the same period. Interim 1983 results have not been released.

FAST-TAX FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Revenue	\$ 69.0	\$ 52.7	\$ 36.7	\$ 26.2	\$ 18.9
• Percent increase from previous year	31%	44%	40%	39%	42%
Net income	\$ 7.6	\$ 5.8	\$ 4.7	\$ 2.4	\$ 1.7
• Percent increase from previous year	31%	23%	96%	41%	N/A

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1978</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Processing services	\$18.9	\$69.0	38%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR (percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
Processing services	25%	\$86	\$108	\$135	\$168	\$210

1986 MARKET SHARE

- RCS processing market - 1.2%.

SUMMARY

- The company is weakened by the Winn family control of top management jobs (chairman, president, and four directors). Otherwise, the company has shown excellent growth in a good market. Competition will increase over the next five years, however, and is already strong from companies such as CCH Computax.

COMPANY HIGHLIGHT

COMDATA NETWORK, INC.
2209 Crestmoor Road
P.O. Box 15822
Nashville, TN 37215
(615) 385-0400

C. W. Harter, Jr., Chairman and
President
Public Corporation, OTC
Total Employees: 507
Total Revenue, Fiscal Year End
12/31/82: \$26,483,436

THE COMPANY

- Comdata Network, Inc. was founded in 1969 to provide computerized remote-access communications services for the furniture moving industry. In 1972 the company changed its business emphasis to providing funds transfer processing services to the trucking industry. In 1977 funds transfer services were expanded to bank credit card holders.
- 1982 revenue reached \$26.5 million, a 34% increase over 1981 revenue of \$19.7 million. Net income rose 41% from \$4.1 million in 1981 to \$5.7 million in 1982. A five-year financial summary follows:

COMDATA NETWORK, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ thousands, except per share data)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Revenue	\$ 26,483	\$ 19,733	\$ 14,369	\$ 11,206	\$ 7,076
• Percent increase from previous year	34%	37%	28%	58%	31%
Net income	\$ 5,718	\$ 4,053	\$ 2,782	\$ 1,905	\$ 1,048
• Percent increase from previous year	41%	46%	46%	82%	22%

(a) Adjusted to reflect a three-for-two stock split effective September 28, 1982.

- Comdata management attributes growth in revenue and net income during the past three years primarily to the increased number of both trucking and credit card processing transactions. In 1982 the company processed approximately 5.3 million transactions as compared to 3.8 million in 1981 and 2.95 million in 1980.
- On November 2, 1982, the company issued 1.1 million shares of common stock, generating proceeds of \$25.1 million, which are currently invested in short-

term interest-bearing securities. Plans for use of the proceeds include expansion of the fuel purchase program.

- Revenue for the three months ending March 31, 1983, reached \$8.4 million, a 45% increase over revenue of \$5.8 million for the same period in 1982. Net income rose 42% during this period from \$1.2 million to \$1.7 million.
- As of December 31, 1982, the company had 507 employees. Comdata now has approximately 600 employees.
- Major competitors for funds transfer services to the trucking industry include Western Union and Instacom, Inc. Primary competition for credit card holder funds transfer services comes from FundsNet, Inc.

KEY PRODUCTS AND SERVICES

- One hundred percent of Comdata's 1982 revenue was derived from processing services. Comdata provides funds transfer services through approximately 4,800 truckstops, motels, resort hotels, and casinos that operate as Service Centers.
- Seventy-five percent of Comdata's 1982 revenue was derived from funds transfer services to the trucking industry. Comdata currently serves over 4,200 trucking companies as compared with 3,643 in 1981 and 2,880 in 1980.
 - The original Comcheck[®] Service was introduced in 1972.
 - The request for transfer of funds to a truck driver is made through a Comcheck Service Center to Comdata. Comdata verifies the trucking company's credit and notifies the Service Center as to the amount and recipient of the requested draft.
 - Once the driver provides the prescribed identification, the Service Center calls Comdata to obtain an authorization number for the requested draft. The driver then endorses the draft in exchange for cash.
 - Trucking company customers are charged an agreed fee per transaction that ranges in most cases from \$3.25 to \$6.50. The Service Center deposits the draft in its bank account. The trucking company remits the amount of the Comcheck draft plus the service fee by wire transfer or check to Comdata.
 - Express Comchek, introduced in 1977, increases the speed and reduces communication expense of money transfers.
 - The truck driver is furnished with a supply of blank Comchek drafts. Upon request, he is given an express code by his dispatcher that contains the trucking company's identity and the dollar amount the driver is authorized to obtain.

- These codes are generated by computer and continuously supplied by Comdata to certain of its trucking company customers. The driver enters other specified information on the Comchek draft and presents it to a Service Center, which then calls Comdata for a transaction authorization number. Upon completion of this procedure, the driver may obtain cash in exchange for the draft.
- In mid-1981 Comdata introduced a fuel purchase program that permits trucking companies and other transportation customers to obtain cash discounts on fuel purchases through an identification card system provided by Comdata.
 - The driver presents his card to the gas station cashier who then calls Comdata to relate the identification number and relevant fuel purchase information.
 - The operator gives the cashier an authorization number for a Comchek draft to be made payable to the Service Center and driver for the amount of fuel purchased.
 - Trucking company clients are notified the following day of all transactions. Remittances are forwarded to Comdata via check or wire transfer.
 - Comdata maintains an on-line data base of current fuel prices for all Service Centers that is updated each time a customer makes a fuel purchase. The company is in the process of installing CRT terminals and printers in the offices of certain customers to allow dispatchers access to the data base.
 - In 1982 Comdata processed over 1 million fuel purchase transactions.
- Twenty-five percent of 1982 revenue was derived from funds transfer services provided to individual credit card holders through Comdata Service Centers located at truckstops, gambling casinos, motels, hotels, or college campuses.
 - The amount of cash received by the card holder is charged, along with Comdata's service fee, to the individual's MasterCard or VISA account. The minimum service fee charged by Comdata for this type of transaction is \$5.75 and increases to \$60.50 for a transfer of \$1,500. Authorization of the amount requested is confirmed by means of computer terminals at the Comdata Data Center which access National Data Corporation's MasterCard and VISA authorization file data base.
 - Comdata's funds transfer service is available in over 133 casinos in Las Vegas, Reno, Tahoe, Atlantic City, and Nassau.

COMDATA NETWORK, INC.

- Approximately 300 hotels use Comdata's reservation guarantee service, through which individuals prepay for their accommodation to guarantee a reservation.
- In April 1983 Comdata announced the availability of a credit card magnetic stripe reader that sends information on-line to the host computer.
 - The readers reduce communications time from an average of 90 seconds to approximately 8 seconds, significantly reducing costs.
 - Magnetic stripe readers have been installed in 40 casinos in Las Vegas. Plans include expanding the service to Comdata's other money transfer Service Centers.

INDUSTRY MARKETS

- Comdata's 1982 revenue was derived as follows:

Trucking industry	75%
Credit card holders	<u>25</u>
	100%

GEOGRAPHIC MARKETS

- Virtually all of Comdata's 1982 revenue was derived from the U.S. Less than 1% of revenue was derived from funds transfer services provided to casinos in the Bahamas.

COMPUTER HARDWARE AND SOFTWARE

- Two IBM 4341s are installed at Comdata's headquarters in Nashville.
- Comdata Service Centers access the Nashville data center via 78 inward and 30 outward WATS lines.

COMPANY HIGHLIGHT

COMPUTER SCIENCES CORPORATION

650 North Sepulveda Blvd.
El Segundo, CA 90245
(213) 615-0311

William R. Hoover, President
Public Company, NYSE
Total Employees: 14,700
Total Revenue, Fiscal Year End
4/3/83: \$694,914,000
Market Value: \$243 million

THE COMPANY

- Founded in 1959 to provide consulting services and to design/implement operating systems, compilers, and other systems software, CSC has expanded to include systems development, engineering, facilities management, turnkey computer-communications systems, communications engineering, batch processing, and network services.
- Revenue growth has been at an AAGR of 19% over the 1979-1983 period and net income at 6%. On January 29, 1982, CSC acquired Associated Credit Services for \$19.9 million. In a full year ACS will add \$27.8 million of revenue to CDC's Data Services group.

COMPUTER SCIENCES CORPORATION FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

ITEM \ FISCAL YEAR	1983	1982	1981	1980	1979
Revenue	\$ 695	\$ 630	\$ 601	\$ 453	\$ 342
• Percent increase from previous year	10%	5%	33%	32%	24%
Net income	\$ 17.9	\$ 17.8	\$ 24.7	\$ 22.7	\$ 14.2
• Percent increase (decrease) from previous year	0%	(28%)	9%	60%	1%

- The substantial drop in 1982 income and flat results in 1983 were due to high costs associated with moderizing the INFONET network and a decline in Medicaid transaction volume. CSC has been largely unsuccessful in the commercial services markets.

COMPUTER SCIENCES CORPORATION

SERVICE TYPE AND DELIVERY MODE

	<u>Service Type</u>	<u>Percent</u>	<u>Revenue Value 1982 (\$ millions)</u>
●	Data Services	27%	\$ 152
	- INFONET		\$90
	- Business Services		46
	- Associated Credit*		7
	- Paid Prescriptions		9
●	Contract Services	73%	478
	- Facilities Management		169
	- Systems Development		309
	Total	100%	\$ 1,108

* Three months' revenue only

INDUSTRY SECTORS SERVED

	<u>Contract Services</u>	<u>Data Services</u>
● Federal Government	68%	23%
● Commercial	3%	59%
● State and Local Government	11%	less than 1%
● International	18%	18%

INTERNATIONAL MARKETS SERVED

- International operations are principally divided between systems design and consulting services (through CSC's Computer Sciences Europe subsidiary) and the remote computing services of INFONET (European INFONET services also handled by Computer Sciences Europe). INFONET services have been expanded, through licenses with local companies, to Japan, Singapore, and Taiwan. In fiscal 1982 international operations provided 18% of the revenue, up from 15% in 1981 from operations in 57 countries.

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1977</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
INFONET	\$ 57.7	\$ 90	9%
Other processing services	1.3	62	116
Facilities management	44.0	169	31
Professional services	<u>132.0</u>	<u>309</u>	<u>19</u>
Total	\$ 235.0	\$630	22%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>Fiscal Year (\$ millions)</u>					
	<u>AAGR</u> <u>(percent)</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
INFONET	3%	\$ 93	\$ 95	\$ 98	\$101	\$ 104
Other processing services	12	74	85	98	113	129
Facilities management	7	182	197	213	230	248
Professional services	<u>10%</u>	<u>346</u>	<u>388</u>	<u>434</u>	<u>486</u>	<u>544</u>
Total company size		\$695	\$765	\$843	\$930	\$ 1,025

1986 MARKET SHARE

- Processing services 2.6%, facilities management 14%, professional services 4.3%.

POTENTIAL IMPACT OF ECONOMY

- A large part (57%) of CSC's revenue comes from the federal government in defense and applied technology activities that are largely unaffected by economy downturns. The same cannot be said of INFONET and other Data Services activities. INFONET revenue declined in 1982, and if Associated Credit revenues had not been added, the Data Services division revenues would have declined too. As it was, they stayed flat at \$152 million.
- In 1983 CSC's growth will pick up both in processing services and in contract services.

POTENTIAL IMPACT OF COMPETITION

- The contract services group has formidable opposition in the marketplace in the shape of TRW, Hughes Aircraft, IBM Federal, and Raytheon. In their medicaid and government facilities management contracts, the principal competition is EDS, who won the \$1 billion viable contract.
- Similarly, the Data Services segment competes with ADP, Service Bureau, GEISCO, and Tymshare. Competitive moves can therefore impact CSC strongly in all their major markets.

POTENTIAL IMPACT OF TECHNOLOGY

- CSC is at the forefront of technology developments and is well able to predict the likely impact of each new technology. Additionally, CSC is a "people resource" company, and the demand for specialist skills has already outstripped available resources. No impact is foreseen.

SUMMARY

- CSC needs to maintain its R&D investment in INFONET to support continued growth of that market and has a difficult task in its attempt to develop a turnkey system division.
- CSC's strength is in its government-based contract services. It has been a poor performer in developing commercial products and services (e.g., Computer Sciences Institute, Computicket, banking software packages, and now problems with Intel acquisitions).
- It is possible that CSC would consider divesting itself of the Data Services division to concentrate on what the president considers the mainstream business, Contract Services. The unwanted parts of the division (medical claims processing, paid subscriptions, etc.) could be sold off.

COMPANY HIGHLIGHT

COMPUTER TASK GROUP, INC.
800 Delaware Avenue
Buffalo, NY 14209
(716) 882-8000

David N. Campbell, President
Public Corporation, OTC
Total Employees: 1,200
Total Revenue, Fiscal Year End
12/31/82: \$40,100,000

THE COMPANY

- Computer Task Group (CTG) was founded in 1966. It primarily provides professional services to Fortune 500 companies in the manufacturing, chemical, and steel industries and Fortune 300 financial companies in banking and insurance. It also provides processing services, turnkey systems, and software products. CTG is expanding its geographic focus to include all major U.S. economic centers.
- During 1981 the business computer division was integrated into the applications product division (turnkey systems to the transportation industry). In 1982 the first personal computer product, Hercules (vehicle maintenance reporting), was announced. On March 24, 1983, Diversified Systems, Inc. was acquired (a professional services company).

COMPUTER TASK GROUP, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Revenue	\$ 40.1	\$ 38.1	\$ 24.9	\$ 18.0	\$ 14.1
• Percent increase from previous year	5%	53%	38%	28%	59%
Net income	\$ 1.1	\$ 1.3	\$ 1.0	\$ 0.6	\$ 0.5
• Percent increase (decrease) from previous year	(15%)	12%	67%	20%	60%

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1978</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Professional services	\$7.4	\$34.2	47%
Batch processing	2.5	3.3	7
Integrated systems	4.2	2.0	(17%)
Interest	<u>-</u>	<u>0.6</u>	<u>N/A</u>
Total	\$14.1	\$40.1	30%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Professional services	35%	\$34	\$46	\$62	\$84	\$113
Processing	7	3	3	3	4	4
Integrated systems	10	2	2	2	3	3
Interest	<u>-</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
Total company size	32%	\$40	\$52	\$68	\$92	\$121

1986 MARKET SHARE

- Professional services 1%, all others less than 1%.

COMPANY HIGHLIGHT

COMSHARE, INC.
3001 South State Street
Ann Arbor, MI 48106
(313) 994-4800

Richard L. Crandall, President
Public Company, OTC
Total Employees: 1,215
Total Revenue, Fiscal Year End
6/30/82: \$78,500,000
Market Value: \$45 million

THE COMPANY

- Founded in 1966 to provide commercial timesharing, the company has expanded into international markets and has specialized in five application areas: personnel administration, financial planning/analysis, certified public accounting, telephone company traffic administration, and trust administration.
- Over the 1976-1981 period, Comshare had increased its revenue at an AAGR of 51% and net income at 62%. Revenue and net income were both short of expectations in 1981 and halted this rapid growth trend. In 1982 revenue was down 2% and this continued for the first nine months of 1983. System W, a mainframe and micro-based decision support system was launched in 1982.

COMSHARE, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Revenue	\$ 78.5	\$ 79.8	\$ 70.8	\$ 47.2	\$ 23.4
• Percent increase (decrease) from previous year	(2%)	13%	50%	102%	40%
Net income	\$ 0.06	\$ 1.5	\$ 4.8	\$ 4.1	\$ 2.7
• Percent increase (decrease) from previous year	(96%)	(69%)	17%	52%	93%

SERVICE TYPE AND DELIVERY MODE

- Ninety-eight percent of Comshare's revenue is derived from processing services and 2% from minicomputer-based services. The majority of the processing revenue comes from specialty applications on the timesharing

network and from several batch data centers. Specialty packages include PARSEC, 4.1.1, PROFILES, and COMPASS. In Europe, foreign exchange banking applications like MONITA, government problem-solving applications like COUNSELA, and VISOR a stock/production control system are offered. Revenue from Comshare's data base management system, QUESTAR, and related products now account for 14% of total revenue.

INDUSTRY SECTORS SERVED

- In the U.S. there are five specialty divisions:
 - Communications Product Services develop applications for telephone companies and network administration.
 - COMPASS Services provide specialty software and services for certified public accountants.
 - Human Resource Management provide applications services for personnel administration.
 - Financial Planning and Control provide financial modeling, analysis, forecasting, and compliance reporting applications for medium and large companies.
 - Trust Services provide employee benefit plans record keeping and personnel trusts. In 1980 Comshare added a hardware sales division, a timesharing wholesale division, and a computer graphics division.

INTERNATIONAL MARKETS SERVED

- Commander II services are offered in London, Tokyo, Toronto, and will shortly will be in from Valbonne (France). There are 16 city branches in the U.K., one in Brussels, two in The Netherlands, one in Cologne, and one in Paris.

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1979</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
U.S. processing and turnkey	\$31.7	\$50.6	17%
European processing	<u>15.5</u>	<u>27.8</u>	<u>22</u>
Total	\$47.2	\$78.4	18%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR (percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
U.S. processing	17%	\$48	\$56	\$ 66	\$ 77	\$ 90
International processing	22	28	34	42	51	62
Turnkey	<u>35</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>7</u>	<u>10</u>
Total company size	20%	\$79	\$94	\$113	\$135	\$162

1986 MARKET SHARE

- Remote computing 1.9%.

POTENTIAL IMPACT OF ECONOMY

- The U.S. and U.K. economy downturns have already significantly impacted Comshare. In 1980 the U.K. operations contributed 41.5% of total revenue and 38% of operating income. Revenue growth had been 89% (1980-1979). In 1981 that pattern stopped. The U.K. grew only 10%, the U.S. only 21% (down from 31% in 1980-1979). No improvement was seen in 1982, but a slow recovery is possible in 1983.

POTENTIAL IMPACT OF COMPETITION

- Comshare's competitors are the top RCS vendors: ADP Network Services, GEISCO, National CSS, and Tymshare. All are facing the same difficulties produced by the economy downturn. No significant impact from the competition is seen over the forecast period.

POTENTIAL IMPACT OF TECHNOLOGY

- Comshare's strategy is to add specialty timesharing products, either through its own development programs or acquisition, expand color business graphics (where they feel there is a large untapped market), expand minicomputer-based systems, and add microcomputer software (development, sale, support).

SUMMARY

- Comshare will continue to develop along its earlier growth path through its specialized products and services as soon as the economic climate improves. The new products place it in good growth markets.

COMPANY HIGHLIGHT

CULLINET SOFTWARE
400 Blue Hill Drive
Westwood, MA 02090
(617) 326-7700

John Cullinane, President
Public Corporation, OTC
Total Employees: 410
Total Revenue, Fiscal Year End
4/30/82: \$49,300,000

THE COMPANY

- Founded in 1968 as Cullinane Database Systems, Inc., Cullinet designs, markets, and supports data base management, EDP audit and retrieval, and applications software products. Cullinet earns 20% of its revenue from international sources and is expanding abroad. Its IDMS system is widely regarded as one of the best available. In 1982 Cullinet became the first software company to be listed on the NYSE.
- Cullinet increased R&D expenditures by 70% from 1981 to 1982 to \$6.1 million. It introduced a color graphics package in early 1982 as part of its IDMS line. Cullinet continues to integrate its decision support systems with IDMS and the applications that can be run on it.

CULLINET SOFTWARE FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Revenue	\$ 49.3	\$ 29.4	\$ 17.7	\$ 12.0	\$ 7.9
• Percent increase from previous year	68%	66%	48%	51%	71%
Net income	\$ 7.6	\$ 4.6	\$ 2.4	\$ 1.8	\$ 1.0
• Percent increase from previous year	65%	89%	34%	72%	108%

HISTORICAL GROWTH BY SEGMENT

- Cullinet derives virtually all of its revenue from its software products.

<u>Segment</u>	<u>1977</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Software products	\$3.7	\$40.9	62%
International	<u>0.9</u>	<u>8.4</u>	<u>56</u>
Total	\$4.6	\$49.3	61%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Software products	30%	\$41	\$53	\$69	\$ 90	\$117
International	<u>28</u>	<u>8</u>	<u>10</u>	<u>13</u>	<u>17</u>	<u>22</u>
Total company size	30%	\$49	\$63	\$82	\$107	\$139

1986 MARKET SHARE

- Software products 1.26%.

COMPANY HIGHLIGHT

CYCARE SYSTEMS, INC.
520 Dubuque Building
Dubuque, IA 52001
(319) 556-3131

Jim H. Houtz, President
Public Corporation, OTC
Total Employees: 276
Total Revenue, Fiscal Year End
12/31/82: \$23,516,000

THE COMPANY

- CyCare Systems, Inc., incorporated in 1969, provides processing services and turnkey systems to physicians and medical group practices, health maintenance organizations, and medical schools.

CYCARE SYSTEMS, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ thousands, except per share data)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Revenue	\$ 23,516	\$ 20,026	\$ 14,808	\$ 10,801	\$ 10,040
. Percent increase from previous year	17%	35%	37%	8%	62%
Net income	\$ 1,166	\$ 1,050	\$ 620	\$ 414	\$ 397
. Percent increase from previous year	11%	69%	50%	4%	8%

- CyCare's primary business of providing services and systems to larger medical group practices was adversely impacted by the economy during the first six months of 1982, contributing to the lower growth rates in revenue and income.
- Effective March 31, 1983, CyCare purchased a portion of the Medical Division of Endata, Inc. (formerly NLT Computer Services Corporation), located in Miami. Terms of the purchase were not disclosed.
 - The Medical Division provides processing services, including data entry and facilities management, to over 200 clients in solo and group medical practices in Florida and Louisiana.
 - The group, which has been merged into CyCare, had 40 employees at the time of purchase.

- As of December 31, 1982, CyCare had 276 employees. The company currently has 325 employees, segmented as follows:

Marketing/sales	20
Installation/customer support	60
Research and development	75
General and administrative	<u>170</u>
	325

- Major competitors in medical processing include Science Dynamics Corporation and Management Systems of Wausau Inc.
- As a result of the March 1983 acquisition of a portion of Endata's Medical Division, CyCare now offers additional processing services primarily to smaller medical practices. Services include data entry of patient information for processing and facilities management contracts involving processing, billing, and reporting services for small practices.

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1980</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Processing services and software licenses	\$10.60	\$13.9	14%
Equipment sales and rentals	4.10	9.6	52
Other income	<u>0.06</u>	<u>0.1</u>	<u>26</u>
Total	\$14.76	\$23.6	26%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Processing services	10%	\$10	\$11	\$12	\$13	\$15
Integrated systems	25	12	15	19	23	29
Other	<u>25</u>	<u>2</u>	<u>3</u>	<u>3</u>	<u>4</u>	<u>5</u>
Total company size	20%	\$24	\$29	\$34	\$40	\$49

INDUSTRY MARKETS

- One hundred percent of CyCare's 1982 revenue was derived from the medical industry, primarily from medical group practices with two or more physicians.

GEOGRAPHIC MARKETS

- Virtually all of CyCare's 1982 revenue was derived from clients located in 37 states.
- U.S. regional sales/service offices are located in Atlanta, Cherry Hill (NJ), Chicago, Dallas, Denver, Miami, Minneapolis, Portland, San Diego, and Spokane.
- CyCare 100 Systems Group is headquartered in Portland.
- CyCare Systems Canada Ltd. is headquartered in Willowdale, Ontario.

COMPUTER HARDWARE AND SOFTWARE

- CyCare has the following systems installed at its Dubuque and Spokane data centers.
 - Four IBM 4341s, running under DOS, are used for network processing.
 - Five Honeywell Level 6s, running under GCOS, are used for product development.
- CyCare's network is accessed via WATS and leased lines.

COMPANY HIGHLIGHT

DIGICON, INC.
3701 Kirby Drive
Houston, TX 77098
(713) 526-5611

Edward R. Prince Jr., President
Public Company, AMEX
Total Employees: 921 (computer
services only)
Total Revenue, Fiscal Year End
7/31/82: \$69,600,000

THE COMPANY

- Formed in 1965 as Digital Consultants, Inc., and incorporated in Delaware in 1969 as Digicon, the company supplies geophysical services to the petroleum industries, including seismic data gathering, processing, interpretation, and the sale of proprietary seismic data. Fifty-three percent of company revenue is attributable to computer services.
- The company operates 19 geophysical data centers and had revenue growth during the 1978-1982 period of 30% per annum. Total revenue stood still in 1982 due to a sharp reduction in foreign revenue. Integrated systems continued to grow strongly, increasing 115% in 1982 over 1981, so that computer services revenue grew 41%.

DIGICON, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Revenue	\$69.6	\$49.3	\$44.6	\$32.1	\$24.1
• Percent increase from previous year	41%	11%	39%	33%	22%

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1978</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Processing services	\$17.6	\$42.0	24%
Integrated systems	<u>1.1</u>	<u>27.6</u>	<u>123</u>
Services total	\$18.7	\$69.6	39%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR (percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Processing services	15%	\$42	\$48	\$ 56	\$ 64	\$ 73
Integrated systems	<u>30</u>	<u>28</u>	<u>36</u>	<u>47</u>	<u>62</u>	<u>80</u>
Computer services total	22%	\$70	\$84	\$103	\$126	\$153

1986 MARKET SHARE

- Five percent of the geophysical services market.

COMPANY HIGHLIGHT

DYATRON CORPORATION

210 Automation Way
P.O. Box 235
Birmingham, AL 35201
(215) 956-7500

Beverly P. Head, President
Public Company, OTC
Total Employees: 525 (March 1981)
Total Revenue, Fiscal Year End
12/31/82: \$33,100,000
Market Value: \$8,547,000

THE COMPANY

- Computerized Automotive Reporting Service (CARS) was founded in 1964 to provide management information systems to automobile dealers. The name was changed to DYATRON in 1980. Automotive dealer integrated systems and remote computing services form 75% of the company's revenue, with software products to the medical sector (MICOMP) and financial software, services, and turnkey systems (COMPUTECH) recently added. DYATRON's strategy is to acquire vertical market products (with or without the company that owns them) rather than to develop such products internally.
- Revenue growth in the 1976-1982 period was at an AAGR of 15%. In February 1982 the Human Resources Information system was sold for \$4 million.

DYATRON CORPORATION FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Revenue	\$ 33.1	\$ 41.6	\$ 34.4	\$ 25.8	\$ 20.2
• Percent increase (decrease from previous year)	(20%)	21%	33%	28%	22%
Net income	\$ (0.7)	\$ (3.8)	\$ 1.47	\$ 1.41	\$ 1.21
• Percent increase from previous year	N/A	N/A	5%	5%	17%

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1976</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Processing services	\$10.1	\$18.7	11%
Software products	-	4.0	N/A
Integrated systems	-	3.0	N/A
Other (equipment rentals, etc.)	2.8	7.3	17
Unconsolidated affiliates	<u>1.1</u>	<u>0.1</u>	<u>(33%)</u>
Total	\$14.0	\$33.1	15%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Processing services	10%	\$19	\$21	\$23	\$25	\$28
Software products	15	4	5	5	6	7
Integrated systems	20	3	4	4	5	6
Other	<u>15</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>11</u>	<u>12</u>
Total company size	13%	\$33	\$38	\$41	\$47	\$53

1986 MARKET SHARE

- All markets less than 1%.

COMPANY HIGHLIGHT

ELECTRONIC DATA SYSTEMS CORPORATION

7171 Forest Lane
Dallas, TX 75230
(214) 661-6000

Morton Meyerson, President
Public Company, NYSE
Total Employees: 11,500
Total Revenue, Fiscal Year End
6/30/82: \$510,000,000

THE COMPANY

- Founded in 1962, EDS is the leading supplier of facilities management services to insurance companies, government funded health insurance, banking, and manufacturing. It is also a leading contender in government facilities management. Revenue growth has been at an AAGR of 28% and net income at a rate of 21% (until 1981 when it rose 31%). EDS has made five acquisitions in the last two years in minicomputer-related markets (banking software, hospital management systems, system manufacturer) and in credit union processing services. The most recent (3/82) was Data Processing of the South, N.C. On December 8, 1982, EDS received the industry's largest systems engineering and integration services contract ever awarded (\$656 million, 10-year contract).

ELECTRONIC DATA SYSTEMS CORPORATION FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Revenue	\$ 510.0	\$ 455.0	\$ 375.0	\$ 274.0	\$ 218.0
• Percent increase from previous year	12%	21%	37%	26%	33%
Net income	\$ 47.0	\$ 37.8	\$ 28.9	\$ 23.7	\$ 19.7
• Percent increase from previous year	24%	31%	22%	21%	20%

SERVICE TYPE AND DELIVERY MODE

- The Insurance Group, with revenue of \$230 million in 1982, provides facilities management, systems installation, consulting, and turnkey systems to commercial insurance clients, Blue Cross/Blue Shield organizations in 11 states, Medicaid/Medicare to state and local governments, and processing services to hospitals, nursing homes, and other health care groups. The group is organized into four divisions (Blue Division, Commercial Insurance, Health Services, and Insurance Administration).

ELECTRONIC DATA SYSTEMS CORPORATION

- The Information Technology Group, with revenue of \$122 million in 1982, provides the same FM, consulting, turnkey, and processing services, plus engineering service to defense and nondefense federal agencies. EDS World is a division of this group, as are Government Services and Federal Systems (VIABLE administrator group).
- The Commercial Systems Group, with revenue of \$158 million in 1982, provides the same range of services to manufacturing, petroleum, transportation, distribution, and travel sectors. Processing services to the Banking/Finance sector are also provided through a Banking and Thrift division. In 1982 the Banking and Thrift division bought the Automated Customer Service division of Republic Bank Dallas and the same operation of Fidelity Bank in Oklahoma City. Cunadata, which provides credit union turnkey systems and processing services to 2,200 credit unions is also part of the group. In 1982 the COWBOY airline reservation system was purchased from Braniff Airlines.

INDUSTRY SECTORS SERVED

	<u>Percent</u>	<u>1982 (\$ millions)</u>
Insurance	45%	\$230
Banking and thrift	12	61
Industrials	5	26
Credit unions	2	10
Airline tickets	1	4
Commercial business	1	4
Government services	29	150
International	3	15
(Investments and other)	2	10

INTERNATIONAL MARKETS SERVED

- EDS World offers services to government and commercial clients in the U.K., Kuwait, Malaysia, Mexico, The Netherlands, Saudi Arabia, and Singapore. Fiscal year 1981 revenue is estimated at \$15 million or 3% of total revenue. EDS frequently operates in joint venture with local companies. The main services offered are in the areas of social security, government, private banking, health care, social welfare, retailing, social insurance, airport administration, and meteorology.

ELECTRONIC DATA SYSTEMS CORPORATION

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1976</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Processing services	-	\$ 54	N/A
Turnkey systems	-	3	N/A
Facilities management	\$125	338	18%
Software products	-	1	N/A
Professional services	-	87	N/A
International	5	19	25
Other, including interest	<u>3</u>	<u>8</u>	<u>18</u>
Total	\$133	\$510	25%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Credit union processing services	22%	\$ 26	\$ 32	\$ 38	\$ 47	\$ 58
Turnkey systems	N/A	3	-	-	-	-
Processing facilities management	15	357	410	472	543	624
Software products	56	1	2	3	5	6
Professional services	25	87	109	136	170	212
International	30	19	25	32	42	54
Other, including interest	<u>20</u>	<u>17</u>	<u>20</u>	<u>24</u>	<u>29</u>	<u>35</u>
Total company size	18%	\$510	\$598	\$705	\$816	\$989

COMPANY HIGHLIGHT

FIRST DATA RESOURCES, INC.
7301 Pacific Street
Omaha, NE 68114
(402) 399-3950

Bob Masterson, President
Subsidiary of AMEX
Total Employees: 2,100
Total Revenue, Fiscal Year End
12/31/82: \$67,000,000

HISTORY AND GROWTH

- Formed as a private corporation in 1971 to provide credit card processing services and to market a software package for a bank card processing system, (spin-off from Mid-America Bankcard Association), FDR was purchased by American Express for approximately \$50 million in January 1980.

FIRST DATA RESOURCES, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Revenue	\$67	\$57	\$50	\$46	\$40
• Percent increase from previous year	18%	14%	9.8%	15%	15%
Net income	-----NOT AVAILABLE-----				
• Percent increase from previous year					

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1978</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Processing services	\$40	\$65	13%
Software products	<u>-</u>	<u>2</u>	<u>N/A</u>
Total	\$40	\$67	14%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR (percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Processing services	12%	\$65	\$73	\$82	\$91	\$102
Software products	<u>20</u>	<u>2</u>	<u>2</u>	<u>3</u>	<u>3</u>	<u>4</u>
Total company size	12%	\$67	\$75	\$85	\$94	\$106

1986 MARKET SHARE

- FDR is the largest credit card processing services vendor in the U.S. By 1986 market share is estimated to be 25%.

COMPANY HIGHLIGHT

GENERAL ELECTRIC INFORMATION SERVICES COMPANY

401 North Washington Street
Rockville, MD 20850
(301) 340-4000

Gregory J. Liemandt, President
Subsidiary of General Electric
Total Employees: 5,050
Total Revenue, Fiscal Year End
12/31/82: \$550,000,000

THE COMPANY

- GE produced the first commercially available timesharing service in 1965 with the Mark I service. Mark II service was provided to 20 metropolitan areas in 1968, and Mark III, combining interactive processing with remote batch processing, in 1972. In 1968 the Distributed Data Processing Service, using user satellite processors with local processing capabilities as access points to the network, was announced by GE, using TI990 minicomputers and 774 intelligent terminals.
- Since inception, GEISCO's revenue has grown to an estimated 1982 total of \$550 million, of which \$85.8 million is captive revenue from the parent. Acquisitions are now making their contribution to growth: 1979 (Mitel, Enercom) and in 1980 (Lambda Technology).

GENERAL ELECTRIC INFORMATION SERVICES COMPANY FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Revenue	\$550	\$475	\$390	\$320	\$256
• Percent increase from previous year	16%	22%	22%	25%	25%
Net income	-----NOT AVAILABLE-----				
• Percent increase from previous year					

SERVICE TYPE AND DELIVERY MODE

- The Mark III service consists of five major elements:
 - Foreground Service (interactive processing on Honeywell computers).
 - Background Service (remote batch processing on Honeywell computers).

GENERAL ELECTRIC INFORMATION SERVICES COMPANY

- Distributed Data Processing services on intelligent TI terminals and minicomputers.
- Mark 3000 Service (remote batch processing on IBM mainframes).
- Professional Services (field technical assistance and contract programming).

INDUSTRY SECTORS SERVED

- GEISCO offers data base systems to commerce, federal agencies, industry, and the securities/currency markets; financial planning tools to the business community; specialized services to engineering, utilities, construction, and communications industries; and many simulation, modeling, statistical, and mathematical tools.

INTERNATIONAL MARKETS SERVED

- Nearly all of the free world including the Middle East, Far East, South America, Australia, New Zealand, Western Europe, and Canada.

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1979</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
International	\$110	\$157	13%
Domestic U.S.	<u>210</u>	<u>393</u>	<u>23</u>
Total	\$320	\$550	20%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
International	15%	\$157	\$180	\$208	\$239	\$ 275
Domestic U.S.	<u>24</u>	<u>393</u>	<u>487</u>	<u>604</u>	<u>749</u>	<u>929</u>
Total company size	22%	\$550	\$667	\$812	\$988	\$ 1,204

1986 MARKET SHARE

- RCS processing 9.4%; all others less than 1%.

POTENTIAL IMPACT OF ECONOMY

- GEISCO is currently serving 600 cities in 24 countries and is still expanding. This wide geographic spread and the importance of the international contribution to the total revenue base mean that GEISCO is somewhat cushioned from domestic and even Western world economy downturns. However, it is not expected that the overall growth rate (despite the introduction of fast-growing acquisitions like Lambda Technology) will exceed 23% over the forecast period.

POTENTIAL IMPACT OF COMPETITION

- GEISCO has a far broader market and user base than any other remote computing services vendor but is not immune to competition, particularly specialized services based on state-of-the-art software. Nevertheless, no major impact is foreseen over the forecast period.

POTENTIAL IMPACT OF TECHNOLOGY

- GE has been quick to adapt to and adopt new technologies as they appear. The company needs to devote some attention to new software technology if it is to maintain its current position. This is particularly relevant in light of the need to switch the network hardware from Honeywell Series 60 at some point during the forecast period.

SUMMARY

- The development of GEISCO in the professional services market will be interesting to watch since the network output is a flow of new customized applications software capable of running on satellite hardware systems connected to the network. A market leader in the remote computing market for years to come, GEISCO is also becoming more aggressive in the software products field where, management believes, "the action will be in the next decade."

COMPANY HIGHLIGHT

GEOPHYSICAL SERVICES, INC.
M/S 3970
P.O. Box 225621
Dallas, TX 75265
(214) 995-2011

Dolan K. McDaniel, Manager
Division of Texas Instruments
Total Employees: N/A
Total Revenue, Fiscal Year End
12/31/82: \$629,000,000

THE COMPANY

- TI began with a small geophysical service company founded by Cecil Green and Eugene McDermott 50 years ago. Today, Geophysical's \$432 million sales (1980) are just over 10% of TI's \$4 billion total. TI's own view of its geophysical services activities claims technological leadership in the market through 3D seismic surveys and its proprietary G-LOG process. Additionally, TI manufactures all its own seismic equipment.
- Geophysical services sales and profit growth have been staggering, with sales improving at an AAGR of 33% (though somewhat unevenly) and profit increasing at an AAGR of 237% (also unevenly). The geophysical exploration market declined precipitously during 1982, but Geophysical Services did well and held its own.

GEOPHYSICAL SERVICES, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Sales	\$629	\$649	\$432	\$267	\$223
• Percent increase (decrease) from previous year	(3%)	50%	61.8%	19.7%	27.4%
Profit	\$ 81	\$119	\$ 63	\$ 36	\$ 31
• Percent increase (decrease) from previous year	(32%)	89%	175%	16%	221%

SERVICE TYPE AND DELIVERY MODE

- There are two services and two modes of delivery:
 - Seismic data acquisition (by traditional recorders, magnetic tape, etc., and by TI minicomputers).

GEOPHYSICAL SERVICES, INC.

- Seismic data processing (by large-scale IBM mainframes and TI mini-computer-based turnkey systems); both are carried out in batch mode.
- TI's 3D service provides a means for analyzing complex exploration problems, particularly subsurface structures.
- TI's G-LOG process is used in defining stratigraphic traps and features in known potential reservoirs.

INDUSTRY SECTORS SERVED

- Geophysical serves the petroleum industry exclusively and within that sector only the exploration market. Both the land and marine sectors are served, primarily in the U.S. and Central America.

INTERNATIONAL MARKETS SERVED

- International markets (Asia, Central America, and the U.K.) are estimated to produce 10% of the processing revenue stated, decreasing to 7% by 1985. Caution: this is only estimated since no hard data is available.

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1979</u> <u>(\$ millions)</u>	<u>1982*</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Processing services	\$52	\$117	31%
Turnkey systems	<u>1</u>	<u>9</u>	<u>108</u>
Total	\$53	\$126	34%

*INPUT estimate

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Processing services	20%	\$117	\$140	\$168	\$202	\$243
Turnkey systems	<u>25</u>	<u>9</u>	<u>11</u>	<u>14</u>	<u>18</u>	<u>22</u>
Total company size	21%	\$126	\$151	\$182	\$220	\$265

POTENTIAL IMPACT OF ECONOMY

- The downturn of the economy and the increasing oil glut will affect Geophysical Services significantly according to Wall Street analysts. Since Geophysi-

cal is not in the field development market in any large measure, it will be directly affected by the number of exploration contracts let.

POTENTIAL IMPACT OF COMPETITION

- As the number of exploration contracts drops, competition will intensify and margins will be affected. Geophysical competes with Geosource and Western Geophysical for half the total market in exploration and processing services. It is likely that a number of smaller concerns will be driven from the market.

POTENTIAL IMPACT OF TECHNOLOGY

- As a subsidiary of the giant TI, Geophysical Services has ready access to the best technology available in the shortest time. Thus any technology charges in the market will be advantageous to Geophysical sooner than to any other company.

SUMMARY

- Dull outlook in the short term with possibly the first downturn in revenue and profits in the company's history. Probably difficult to approach as an acquisition since it was (emotionally) the founding block of the TI empire. It is also a substantial contributor to TI's bottom line (38% of total profit).

COMPANY HIGHLIGHT

GEOSOURCE, INC.
2700 South Post Oak Road
Suite 2000
Houston, TX 77056
(713) 961-1111

John D. Platt, Chairman and CEO
Subsidiary of Aetna Life
Total Employees: 7,400
Total Revenue, Fiscal Year End
9/30/81: \$731,000,000

THE COMPANY

- Begun in 1973 as a privately held corporation by Aetna Life, Rockwell International, and private investors, the company bought Ray Engineering, a worldwide geophysical services and equipment company, and immediately thereafter, Petty Geophysical Engineering Company. The two were combined to form the Petty-Ray Geophysical Division, which is still the heart of the company. On April 16, 1982, Aetna Life, which owned 29% of Geosource, agreed to acquire the remaining 71% for stock worth \$638 million.
- During the last five years, the company's sales have increased by an AAGR of 29% and net income at an AAGR of 33%. In 1982 public release of the company's financials was discontinued.

GEOSOURCE, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

ITEM \ FISCAL YEAR	1981	1980	1979	1978	1977
Sales	\$ 731.0	\$ 539.0	\$ 419.0	\$ 320.0	\$ 264.0
• Percent increase from previous year	36%	29%	31%	21%	23%
Net income	\$ 58.6	\$ 41.2	\$ 26.5	\$ 22.0	\$ 18.9
• Percent increase from previous year	42%	56%	21%	17%	29%

Note: not adjusted to reflect acquisitions.

SERVICE TYPE AND DELIVERY MODE

- Currently all the seismic survey data processing is done in batch mode using plug-compatible IBM mainframes and its own TEMPUS package. This is gradually being changed to a DEC VAX 11/780 multitasking environment. There are 17 data processing centers worldwide, all operating on a similar basis. Geosource also offers customized software (GEOSTAR, state-of-the-

art DBMS), turnkey systems (TEMPUS and COMMAND), and a high-resolution output device called LASER-PLOT (photographic recorder with 500lpi resolution).

INDUSTRY SECTORS SERVED

- Three major markets are served within the petroleum industry.
 - Petroleum exploration.
 - Petroleum development.
 - Petroleum processing and distribution.
- Thus the Geosource revenue includes 100 land crews, four marine vessels, valves, pumps, drilling rigs, sensors, cables, etc. Even the "services" components include data acquisition (land and marine) as well as specialized interpretation services.

INTERNATIONAL MARKETS SERVED

- Geosource is active in 19 countries, with 60% of its crews operating outside the U.S. It obtained a world first when it contracted to explore the Tsaidam basin of Western China for \$34 million.

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1980</u> <u>(\$ millions)</u>	<u>1981</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Processing services	\$75	\$100	33%
Total adjusted for acquisitions	539	731	36

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Processing services total	24%	\$120	\$130	\$169	\$220	\$286
Total company size	24	120	130	169	220	286
Total international	30%	\$ 52	\$ 67	\$ 87	\$114	\$148

POTENTIAL IMPACT OF ECONOMY

- Geosource is less vulnerable to economic downturns, oil gluts, and a price decrease of oil than most, since (1) exploration represents an already decreasing proportion of revenue (now 53%), (2) third-world exploration (South America, Africa, Asia, China) will continue even in a Western World recession, (3) Geosource has begun to expand operations into the petroleum development market where the fruits of past exploration/analysis are culled. However, decreased crew activity occurred in 1982 with the consequent loss of earnings.

POTENTIAL IMPACT OF COMPETITION

- Geosource has R&D expenditures in the top three companies of the industry. New technology and innovative products are a must in the market since seismic/exploration technology has a very short life. In addition, Geosource has a good balance between U.S./Western World earnings, and Third World country earnings as well as a presence in all three of the major petroleum industry markets (exploration, development, and processing/distribution).

POTENTIAL IMPACT OF TECHNOLOGY

- Initially, higher and higher oil prices made the risk of deeper drilling, offshore drilling, and drilling in hostile environments attractive. The Western World's sudden recession and the consequent drop in oil prices make the new technology needed for these harsher environments less important since exploration is likely to decrease in intensity.
- Computer technology development, along with the integration of in-house developed software for specific applications such as rig positioning, is still very important, and Geosource is well placed in this regard.

SUMMARY

- A very promising company, but no longer available. Revenue growth slowed to 20% in 1982 and to 8% in 1983 before resuming stronger growth trends, while the share of international revenue is expected to rise from 40% to 50%.

COMPANY HIGHLIGHT

INFORMATICS GENERAL CORPORATION
 21031 Ventura Boulevard
 Woodland Hills, CA 91364
 (213) 887-9040

Dr. Walter F. Bauer, President
 Public Company, OTC
 Total Employees: 2,490
 Total Revenue, Fiscal Year End
 12/31/82: \$170,200,000

THE COMPANY

- Informatics was founded as a private company in 1962 to provide custom programming services. Equitable Life held 90% of the stock from 1974 to August 1980. The company is now owned by the public (90%) and directors/employees (10%). Over the last five years, revenue growth has been slowing noticeably, but net income has grown 15%. The main culprit is the Software Products Division, which until 1981 was growing slowly and barely breaking even while accounting for 24% of the staff. In 1981 a turnaround was achieved in this area. In 1982 the company began concentrating on vertical markets: legal information systems, insurance and financial systems, distribution and management systems, management and accounting systems, and information resources systems.

INFORMATICS GENERAL CORPORATION FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Revenue	\$ 170.2	\$ 150.3	\$ 126.0	\$ 112.4	\$ 92.5
. Percent increase from previous year	13%	19%	12%	21%	24%
Net income	\$ 5.5	\$ 5.1	\$ 7.7	\$ 5.1	\$ 3.2
. Percent increase (decrease) from previous year	8%	(34%)	51%	59%	246%

SERVICE TYPE AND DELIVERY MODE

- There are three operational divisions:
 - The Software Products segment develops, purchases, and markets implementation systems and applications products.

INFORMATICS GENERAL CORPORATION

- The Information Processing Services segment offers timesharing, manual and automated data bases, and document handling systems.
- The Professional Services segment serves government (mainly) and commercial clients.

INDUSTRY SECTORS SERVED

- The principal industry sectors served are, as a percent of revenue:

	<u>1978</u>	<u>1982</u>
- <u>U.S. Government</u>		
. Software products	1%	1%
. Professional services	12	7
. Processing services	10	9
- <u>Commercial and Other</u>		
. Software products	34	39
. Professional services	18	18
. Processing services	25	26

INTERNATIONAL MARKETS SERVED

- Informatics maintains nine international offices, which produce a declining share of the revenue:

	<u>1979</u>	<u>1982</u>
International	14%	12%

- Sixty-three percent of this revenue is from software product sales and licenses.

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1976</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Software products	\$21.5	\$68.0	21%
Information processing	16.2	60.3	25
Professional services	21.6	42.4	12

Note: Divisional revenue includes intersegment revenue, not broken out separately.

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Software products	21%	\$ 55	\$ 67	\$ 81	\$ 97	\$118
Information processing	22	59	72	88	107	131
Professional services	12	36	40	45	51	57
International	<u>5</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>
Total company size	18%	\$170	\$200	\$236	\$278	\$330

1986 MARKET SHARE

- Software products 0.4%; processing services 0.9%; professional services 0.6%.

POTENTIAL IMPACT OF ECONOMY

- The principal source of Informatic's growth has been acquisition. Informatic's software products have not been as successfully marketed as they deserve. Fifty percent of all software revenue comes from one product: MARK IV. However, 1981 results showed a remarkable improvement in software revenue from implementation systems and insurance products. The downturn in the economy moderated this improvement in 1982, however.

POTENTIAL IMPACT OF COMPETITION

- Software technology development is a direct function of R&D dollars spent and Informatics has increased substantial costs in an effort to revitalize its product line. Products such as TAPS are never sold through OEMs, systems houses, manufacturers (PRIME, Harris, Nanodata), and RCS vendors such as COMSERVE. Informatics plans to use these distribution channels more in the future.
- A significant market under development is that for systems implementation tools, and Informatics has clearly identified a high-growth market and is establishing an initial lead in software technology.

SUMMARY

- Informatics may be on the verge of a new phase in its growth based on its systems implementation products and professional services. Acquisition is likely to be the prime source of growth in the processing services area, however.

COMPANY HIGHLIGHT

INFORMATION BUILDERS, INC.
1250 Broadway
New York, NY 10001
(212) 736-4433

Gerald Cohen, President
Privately Held
Total Employees: 150
Total Revenue, Fiscal Year End
12/31/82: \$19,200,000

THE COMPANY

- Founded in 1975, Information Builders, Inc. (IBI) markets FOCUS, a nonprocedural report preparation, data analysis, and comprehensive DBMS to over 800 companies worldwide.
- IBI has been experiencing rapid growth: it plans to increase revenue by 35% in 1983 to \$26 million. IBI continues to offer new applications for its software products. In May 1983 IBI unveiled a version of FOCUS for the IBM-PC (called PC/FOCUS) offering identical functionality to the mainframe version. No mergers or acquisitions are planned.

INFORMATION BUILDERS, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Revenue	\$19.2	\$10.7	\$4.6	\$2.7	\$1.4
• Percent increase from previous year	79%	133%	70%	93%	130%
Net income	-----NOT AVAILABLE-----				
• Percent increase from previous year					

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1977</u> (\$ millions)	<u>1982</u> (\$ millions)	<u>AAGR</u> (percent)
Software products	\$0.6	\$17.3	96%
International	-	1.9	N/A
Total	\$0.6	\$19.2	100%

INFORMATION BUILDERS, INC.

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR (percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Software products	35%	\$17	\$23	\$32	\$42	\$57
International	<u>50</u>	<u>2</u>	<u>3</u>	<u>5</u>	<u>7</u>	<u>10</u>
Total company size	37%	\$19	\$26	\$37	\$49	\$67

1986 MARKET SHARE

- All markets less than 1%.

COMPANY HIGHLIGHT

THE KIRCHMAN COMPANY, INC.
(Florida Software Devices)
711 E. Altamonte Avenue
Altamonte Springs, FL 32701
(305) 831-3001

Kenneth P. Kirchman, President and
Chairman
Private Corporation
Total Employees: 800
Total Revenue, Fiscal Year End
3/31/82: \$46,000,000*

THE COMPANY

- Kirchman was started in 1969 with the intention of developing and marketing software products and made an early decision to concentrate on financial applications. Kirchman now supplies software systems primarily to commercial banks for batch processing of financial applications.
- Revenue in fiscal year 1982 was approximately \$46 million, a 33% increase over fiscal year 1981.
- Kirchman presently has two divisions: Florida Software Services (FSS), which markets the 14 software systems, and Florida Computer Services, which provides processing services.
- FSS maintains constant communication with its users through F.U.R.S.T. (Florida Software Services Users Researching System Together), a separate user group sponsored by Florida Software but independent of the company. Chartered in 1975, F.U.R.S.T. now has a membership of 1,400 banks. The group meets annually to provide FSS management with feedback about how systems might be enhanced and to provide input about new systems FSS might develop.
- Kirchman has 800 employees distributed approximately as follows:

Marketing/sales	72
Software services/ customer support	520
Computer operations	160
General and administrative	<u>48</u>
	800

KEY PRODUCTS AND SERVICES

- Florida Software Services is a leader in bank application software packages. Software products account for 75% of revenue, and processing services account for 25%.

*INPUT estimate

- The 14 software products available from Florida Software Services are described below:
 - Central Information File (CIF II) has total access to all application master file information. On-line inquiry includes: on-line statements, history information, credit information, payment information, stops, holds, floats, assignments, ledger and available balances, payoffs, and IRA payment schedules. CIF II is also designed to generate highly detailed "relationship" information. There are currently 16 systems installed.
 - Certificates of Deposit III (CD III) automates routine clerical chores while also keeping the user up to date on rapidly changing federal regulations. The system provides a comprehensive set of daily, monthly, and year-end reports and produces a complete, clear audit trail. There are 219 CD III systems in use.
 - The Check Reconciliation system produces reports that cover the entire checking process from start to finish: maintenance, checks issued, checks paid, and a comprehensive checks outstanding report. The system permits check reconciliation within predetermined plus or minus ranges and will group checks by length of time outstanding. A billing statement is produced that allows the user to charge each account on a per item and/or minimum billing amount basis. There are eight installations of this system.
 - Commercial Loan provides immediate access to information such as investor remittance data, loan type balances, participation reports, geographic loan analyses, interest rate change reports and future maturities information. One hundred forty-nine systems have been installed.
 - Dealer Floor Plan II features include calculation of interest using average daily in actual balance, curtailment and flat fee billing, variable statement dates, inventory audit reports, prime rate change notices, and management reports including credit line commitment penalty, UCC expiration, yield units, and dollars. There are currently 72 installations.
 - Demand Deposit IV (DDA IV) offers state-of-the-art accounting functions for demand deposit accounts, credit line services, automatic transfers, and NOW accounts. DDA IV has been installed at 102 locations.
 - Financial Management/General Ledger (FM/GL II) enables each user to design a chart of accounts to control content, format, and frequency of numerous comparative financial reports. FM/GL II also includes complete cost accounting, budgeting, and forecasting functions. There are 95 installations of the FM/GL II system.

- Installment Loan IV (ILIV) offers the user the flexibility to choose from a wide range of loan types, accrual and rebate methods, payment schedules, and fees. The system includes a Bank Control Record (BCR), which allows for the customization of individual requirements for every organization and branch on the system while maintaining them all on the same master file for ease of operation. IL IV has been installed at 158 locations.
- Mortgage Loan Extended (MLX) offers thorough warehousing and investor reporting capabilities. It provides complete and flexible processing of all types of mortgage loans while allowing the user to choose from a virtually unlimited combination of loan types, accrual methods, interest calculations, payment methods, and billing cycles. One hundred forty-seven systems have been installed.
- The Payroll system features a choice of pay cycles, payment types, and deductions. Reports are available on payroll expenses, quarter-to-date and year-to-date totals, labor distribution data for distributing salaries by cost center and for project. With 92 installations, both the system and the documentation are continually updated to reflect changing federal reporting requirements.
- Savings System III (SAV III) processes a variety of savings accounts including regular savings, club accounts, corporate, golden passbook, passbook, and IRA. The system offers 98 different types of savings accounts, 14 different types of fund transfers within savings and between checking and savings. SAV III has a built-in alternate name/address mailing capability. With SAV III each type of savings account can be set with its own method of interest payment. Through the use of an Organizational Control Record, each organization/branch can have its own set of processing parameters. SAV III is a new FSS product.
- Stock Transfer maintains company stockholder records. It generates information that helps the user monitor stock certificate buys and sells. The system maintains a complete history on every certificate, telling who owns what certificates and how many they own. The entire proxy cycle is also handled by this system including the generation and tabulation of voting results, the production of cash dividend checks, stock dividends, stock splits, and warrants.
- Supplies Inventory Control System informs the user of inventory: what is needed, what it costs, who the vendor is, what is on order, who is using the supplies in what department, and how efficiently they use them compared to other departments. There are 78 installations of the Supplies Inventory Control System.
- All of Florida Software's systems operate with a multibank/multibranch capability that allows each bank to select its own processing parameters. Clients can select reports by bank/branch, establish bank policies on accruals, year base, run frequencies, processing days, and statement cycles.

THE KIRCHMAN COMPANY, INC.

- FSS software systems range in price between approximately \$3,000 and \$40,000 depending on hardware. All systems are modular and provide information both through reporting and on-line. The FSS systems are written in COBOL for operation on IBM Systems 360/370/30XX/43XX with DOS or OS environments or for Burroughs B2805.
- Florida Computer Services Division offers remote batch processing services for approximately 60 banks in the state of Florida. All of FSS's financial applications are available on a network comprised of leased and WATS lines. Data centers are located in Tallahassee, Florida as well as at the headquarters location in Altamonte Springs.

INDUSTRY MARKETS

- Almost 100% of FSS's revenue is derived from the banking industry: commercial banks and thrift institutions.
 - In addition to banks, FSS provides processing services on its network for payroll, check reconciliation, library past due, and apartment billings management.
 - Prior to spring 1979, FSS provided limited facilities management to the medical industry through Florida Medical Services. This division has been phased out.

GEOGRAPHIC MARKETS

- FSS products are currently used by over 1,500 banks nationwide. There are FSS installations in New Zealand and Canada as well.

COMPUTER HARDWARE AND SOFTWARE

- Each of the FSS data centers operates one IBM System/370 Model 148 running under DOS.

SUMMARY

- An excellent acquisition target with enormous potential. The company is strongly directed with well-established software products that compete well in their respective markets.

COMPANY HIGHLIGHT

MANAGEMENT DECISIONS SYSTEMS, INC.

200 Fifth Avenue
Waltham, MA 02254
(617) 890-1100

John Wurts, President
Privately Held
Total Employees: 193
Total Revenue, Fiscal Year End
4/30/82: \$20,700,000

THE COMPANY

- Founded in 1967, Management Decisions Systems, Inc. (MDS) sells a single software product, Express, a broad, cross-industry decision support package for financial, marketing, and production management. Revenue comes principally from U.S. sales (90%) and the remainder from Europe (10%). Seventy-five percent of revenue is from software products and associated license fees.
- Current developments include a push for international growth and a major (unspecified) development in software offerings. Personnel growth from 1981 to 1982 was 50% mostly in software services and customer support. International revenue is 4% of total.

MANAGEMENT DECISIONS SYSTEMS, INC. FOUR-YEAR FINANCIAL SUMMARY (\$ millions)

ITEM \ FISCAL YEAR	1982	1981	1980	1978
Revenue	\$20.7	\$16.1	\$12.0	\$8.0
• Percent increase from previous year	29%	34%	50%	N/A
Net income	-----NOT AVAILABLE-----			
• Percent increase from previous year				

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1981</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Software products	\$12.1	\$15.6	29%
Professional services	<u>4.0</u>	<u>5.0</u>	<u>25</u>
Total	\$16.1	\$20.6	28%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Software products	20%	\$16	\$19	\$23	\$28	\$33
Professional services	<u>25</u>	<u>5</u>	<u>6</u>	<u>8</u>	<u>10</u>	<u>12</u>
Total company size	21%	\$21	\$25	\$31	\$38	\$45

1986 MARKET SHARE

- All markets more than 1%

COMPANY HIGHLIGHT

MANAGEMENT SCIENCE AMERICA, INC.

3445 Peachtree Road, N.E.
Atlanta, GA 30326
(404) 239-2000

John P. Imlay, Chairman and CEO
William M. Graves, President and COO
Public Corporation, OTC
Total Employees: 1,400
Total Revenue, Fiscal Year End
12/31/82: \$101,000,000
Computer Services Revenue:
\$70,568,840
Market Value: \$354 million

THE COMPANY

- Management Science America, Inc. (MSA), founded in 1963, develops and markets financial management, human resource, cash management, and manufacturing applications software packages for use on medium- to large-scale mainframes. The company also markets general business, office productivity, and vertical market software products for microcomputers. MSA is the largest independent international supplier of packaged software products.

MANAGEMENT SCIENCE AMERICA, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ thousands, except per share data)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Revenue	\$ 101,244	\$ 73,139	\$ 53,724	\$ 39,397	\$ 26,160
• Percent increase from previous year	38%	36%	36%	51%	50%
Net income	\$ 8,955	\$ 5,487	\$ 2,912	\$ 2,591	\$ 1,134
• Percent increase (decrease) from previous year	63%	88%	12%	128%	44%

- MSA's five international subsidiaries are:
 - Management Science America (Canada) Ltd., headquartered in Toronto.
 - MSA International, Inc., headquartered in Maidenhead, Berkshire (U.K.).
 - MSA Limited, headquartered in Maidenhead, Berkshire (U.K.).

- Management Science America (Australia) Pty. Ltd., in North Sydney.
- Peachtree Software International Ltd., headquartered in Maidenhead, Berkshire (U.K.), was formed in late 1981 to market Peachtree products internationally.
- Major competitors for MSA's financial software include McCormack & Dodge, Software International (GEISCO), and University Computing. Major competitors of Peachtree Software are Micropro International, VisiCorp, and Systems Plus.

HISTORICAL GROWTH BY SEGMENT

Segment	Fiscal Year (\$ millions)			
	<u>1982</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>
Software package license fees	\$ 70.1	\$50.8	\$39.4	\$28.6
Support agreement fees	22.6	16.4	11.1	8.3
Customer education	3.2	2.1	1.4	0.8
Investment income	4.1	1.3	1.2	1.2
Interest	<u>1.3</u>	<u>2.5</u>	<u>0.6</u>	<u>0.5</u>
Total	\$ 101.3	\$73.1	\$53.7	\$39.4

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	AAGR (percent)	Fiscal Year (\$ millions)				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Software products	28%	\$ 70	\$ 90	\$115	\$166	\$188
Maintenance	30	23	30	39	51	66
Other	<u>35</u>	<u>8</u>	<u>11</u>	<u>15</u>	<u>20</u>	<u>27</u>
Total company size	29%	\$101	\$131	\$169	\$237	\$281

INDUSTRY MARKETS

- Approximately 33% of MSA's 1981 revenue was from manufacturing companies, and a large percentage came from banking and finance clients.
- There is also some concentration in the areas of insurance, health care, education, transportation, retail and wholesale distribution, government, and energy-related companies.

- One or more of the company's packages are used by 282 of the Fortune 500 companies.

GEOGRAPHIC MARKETS

- Eighty-two percent of MSA's 1981 revenue was derived from clients across U.S. geographic sectors. Foreign revenue represented 18% or \$13.4 million of 1981 revenue.
 - Approximately 20% of new business in 1981 was derived from international operations. MSA management projects that overseas business will represent about one-third of total revenue in five years.
- Revenue was distributed geographically in 1981 as follows:

United States	82
United Kingdom	7
Canada	4
Western Europe	3
Australia/New Zealand	3
Other International	<u>1</u>
	100%

COMPANY HIGHLIGHT

McCORMACK & DODGE
560 Hillside Avenue
Needham Heights, MA 02194
(617) 449-4012

Frank Dodge, President
Subsidiary of Dun & Bradstreet
Total Employees: 477
Total Revenue, Fiscal Year End
12/31/82: \$38,000,000

THE COMPANY

- Founded in 1969, McCormack & Dodge (M&D) develops and sells a complete line of financial software application packages for use on all major mainframes and minis. M&D sells to approximately 2,800 medium-to-large cross-industry corporations and to government organizations.
- In 1981 M&D had trouble with the premature release of its new accounts payable package. In March 1982 M&D acquired HRIS Division of Dyatron, Inc., Birmingham (AL), for a total of \$4 million - \$800,000 cash with balance in notes over four years. HRIS sells payroll and personnel software products. In April 1983 M&D announced a product to link the IBM-PC with mainframe data financial bases (including a packaged version of Lotus Development Corporation's 1-2-3).
- In May 1983 Dun & Bradstreet signed an agreement to purchase M&D for \$50 million and contingent performance payments.

MCCORMACK & DODGE FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Revenue	\$38.0	\$25.5	\$16.0	\$7.6	\$3.2
• Percent increase from previous year	49%	59%	111%	141%	84%
Net income	-----NOT AVAILABLE-----				
• Percent increase from previous year					

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1976</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Software products	\$1.2	\$38	78%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Software products	35%	\$38	\$51	\$69	\$93	\$126

1986 MARKET SHARE

- Applications software products market 2.5%.

COMPANY HIGHLIGHT

NCR DATA SERVICES

1700 S. Patterson Boulevard
Dayton, OH 45479
(513) 445-4600

James D. Wise, Vice President
Wholly owned subsidiary of NCR
Total Employees: 1,500 (Data Services)
Total Revenue, Fiscal Year End
12/31/82: \$79,000,000

THE COMPANY

- NCR's wholly owned subsidiary, NCR Data Centers, offers batch, remote computing, and COM services primarily to thrift institutions and retail establishments. Over 1,200 retail firms and 568 financial institutions are customers in the U.S.
- NCR Data Services has closed 26 data centers since 1980, mainly in international locations. Four new U.S. centers have been opened in the same period.

NCR DATA SERVICES FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Revenue	\$79	\$71	\$64	\$58	\$53
• Percent increase from previous year	12%	11%	11%	10%	10%
Net income	-----NOT AVAILABLE-----				
• Percent increase from previous year					

SERVICE TYPE AND DELIVERY MODE

- The data centers offer batch, interactive, and remote batch processing of U.S. thrift institution accounts (savings and loan, credit unions, mutual savings banks). On-line NOW account processing was first offered in 1981 as part of NCR's STARCOM financial services system.
- COM services are also offered to retail and financial users.
- The larger data centers produce \$4 million of revenue, the smaller ones approximately \$0.5 million. There are 42 centers in all, nationwide.

INDUSTRY SECTORS SERVED

Retail/distributors	20%
Thrift	35%
All other	45%

INTERNATIONAL MARKETS SERVED

U.S.	59%
Canada	3%
International	38%

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1978</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Remote computing	\$29	\$43	10%
Batch processing	22	27	5
COM	<u>2</u>	<u>9</u>	<u>46</u>
Total	\$53	\$79	11%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Remote computing	10%	\$43	\$47	\$52	\$ 57	\$ 63
Batch processing	5	27	28	29	31	33
COM	<u>25</u>	<u>9</u>	<u>11</u>	<u>14</u>	<u>17</u>	<u>22</u>
Total company size	11%	\$79	\$86	\$95	\$105	\$118

1986 MARKET SHARE

- Less than 1% in all categories.

POTENTIAL IMPACT OF ECONOMY

- The growth generated by the deregulation of the savings and loans (thrift organizations in general) will have an impact on the processing revenue, but NCR's data centers are not geared to take full advantage of the opportunity.

POTENTIAL IMPACT OF COMPETITION

- Many large computer service competitors (e.g., EDS) have a strong interest in the financial and credit union processing market, and NCR is vulnerable to such thrusts since management attention is concentrated on hardware sales. The impact of such competitive losses, like total revenue, is hard to evaluate.

POTENTIAL IMPACT OF TECHNOLOGY

- Not relevant in this context.

SUMMARY

- The computer services business does not appear to be a corporate goal for NCR and may be separable as a result.

COMPANY HIGHLIGHT

NATIONAL DATA CORPORATION

One National Data Plaza
Corporate Square
Atlanta, GA 30329
(404) 329-8500

L. C. Whitney, President and CEO
Public Corporation, OTC
Total Employees: 2,458
Total Revenue, Fiscal Year End
5/31/82: \$120,325,000
Market Value: \$257 million

THE COMPANY

- National Data Corporation (NDC) was incorporated in 1967 in Delaware to provide specialized data processing and facilities management services. NDC provides cash management, credit card, merchandising, health care, information management processing, and professional services. Its facilities management services include all phases of credit card billing, from credit approval through collections.
- In the first nine months of fiscal 1983, NDC reported revenue of \$89,886,000 and net income of \$7,936,000 versus \$90,160,000 and \$8,442,000 for the nine month period of fiscal 1982. The main reason for the flat revenue and 6% profit drop was the loss of the ARCO contract, which would have contributed \$7 million.

NDC FIVE-YEAR FINANCIAL SUMMARY (\$ thousands, except per share data)

ITEM \ FISCAL YEAR	5/82	5/81	5/80	5/79	5/78
Revenue (a)	\$ 120,325	\$ 96,519	\$ 81,050	\$ 68,321	\$ 57,027
• Percent increase from previous year	25%	19%	19%	20%	-
Net income (b)	\$ 11,224	\$ 8,140	\$ 6,827	N/A	N/A
• Percent increase from previous year	38%	19%	-		

- (a) Financials have been restated to account for the acquisition of Rapidata, Inc. on a pooling-of-interests basis.
- (b) Restated to conform with the Financial Accounting Standards Board Statement #43 relating to the accrual of vacation pay.

NATIONAL DATA CORPORATION

HISTORICAL GROWTH BY SEGMENT

	5/82	Percent Increase (Decrease) from Pre- vious Year	5/81	Percent Increase (Decrease) from Pre- vious Year	5/80	Percent Increase (Decrease) from Pre- vious Year
Data Processing Services						
- Cash Management	\$ 29,466	26%	\$23,291	42%	\$16,448	20%
- Credit Card	28,961	45	19,905	30	15,281	22
- Information Services	32,555	20	27,116	6	25,686	11
- Merchandising	4,998	6	4,718	(8)	5,119	61
- Health Care	6,258	53	4,082	30	3,128	165
- Miscellaneous	<u>430</u>	(70)	<u>1,455</u>	58	<u>918</u>	6
Subtotal	\$ 102,668		\$80,667		\$66,580	
Facilities Management						
- ARCO	\$ 12,410	9%	\$11,349	2%	\$11,075	(1%)
- Other	<u>5,247</u>	17	<u>4,503</u>	33	<u>3,395</u>	46
Subtotal	\$ 17,657		\$15,852		\$14,470	
Total Company Revenue	\$ 120,325		\$96,519		\$81,050	

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR (percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Processing services	20%	\$103	\$124	\$148	\$178	\$214
Facilities management	<u>10</u>	<u>18</u>	<u>20</u>	<u>22</u>	<u>24</u>	<u>26</u>
Total company size	19%	\$121	\$144	\$170	\$202	\$240

NATIONAL DATA CORPORATION

- In May 1982 NDC had 2,458 employees. The company reduced that number when it discontinued its contract with ARCO. There are currently 2,215 employees, divided as follows:

Marketing/sales	202
Software services/customer support	109
Computer operations and communications	1,454
General and administrative	<u>450</u>
	2,215

- NDC considers its principal competitors to be Automatic Data Processing, Chemical Bank of New York (BankLink), First Data Resources, Three PM, PharmAssist, HealthCom, and credit card associations.

GEOGRAPHIC MARKETS

- Approximately 98% of NDC's fiscal 1982 revenue was derived from the U.S. The remaining 2% of revenue was international, primarily Canadian.
- NDC's U.S. marketing offices are in Ann Arbor; Charleston (SC); Fairfield and Cherry Hill (NJ); Lombard (IL); Los Angeles; New York City, Lawrence, and Melville (NY); Columbus (GA); Dallas and San Antonio (TX); Miami, Ft. Lauderdale, and Orange Park (FL); Southfield (MI); Stamford (CT); Philadelphia; Reno; and Arlington (VA).
- International marketing offices are located in Frankfurt; London; and Don Mills, Ontario. NDC is planning to open an office in the Far East in the near future.

COMPANY HIGHLIGHT

NATIONAL CSS, INC.
187 Danbury Road
Wilton, CT 06897
(203) 762-2511

Robert E. Weissman, Chairman
David S. Fehr, President
Subsidiary of The Dun & Bradstreet
Corporation
Total Employees: 1,750
Total Revenue, Fiscal Year End
12/31/82: \$110,000,000

THE COMPANY

- National CSS, Inc. (NCSS), formed in 1967, markets remote computing services and software products internationally. Since mid-1979 NCSS has operated as a subsidiary of The Dun & Bradstreet Corporation (D&B), reporting to Business Information Services. Revenue declined slightly in 1982 with income from the Software Products Division down.
- Recent NCSS acquisitions include Multiple Funding Services Inc., headquartered in New York City, in June 1982. The company will operate as part of the Remote Computer Services Division. Multiple Funding, with 150 clients, markets software packages used for sales support by life insurance representatives.

HISTORICAL GROWTH BY SEGMENT

- NCSS revenue for 1981 and 1980 by type of service was estimated as follows:

	1981		1980	
	Revenue (\$ millions)	Percent of Total	Revenue (\$ millions)	Percent of Total
Processing services				
. Remote computing	\$100	89%	\$78	81%
. Batch services	-	-	6	6
Software products	12	11	8	8
Minicomputer systems	<u>-</u>	<u>-</u>	<u>5</u>	<u>5</u>
	\$112	100%	\$97	100%

NATIONAL CSS, INC.

- Processing services were further broken down as follows:

	1981 Revenue (\$ millions)	Percent of Total	1980 Revenue (\$ millions)	Percent of Total
Applications Services (network products developed or licensed by NCSS)	\$ 70	70%	\$54	64%
Basic Timesharing Services (utility or user software on network service)	30	30	24	29
Batch services	<u>-</u>	<u>-</u>	<u>6</u>	<u>7</u>
	\$100	100%	\$84	100%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR (percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Processing services	12%	\$ 98	\$109	\$122	\$136	\$152
Software products	<u>10</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>16</u>	<u>18</u>
Total company size	12%	\$110	\$122	\$136	\$152	\$170

INDUSTRY MARKETS

- NCSS derived 1982 remote computing revenue from the following industry sectors:

Discrete manufacturing	23%
Process manufacturing	6
Transportation	1
Utilities	23
Banking and finance	5
Insurance	5
Medical	1
Education	1
Retail distribution	1
Wholesale distribution	2
Government	2
Services	20
Other industries	<u>10</u>
	100%

GEOGRAPHIC MARKETS

- Approximately 97% of NCSS 1981 remote computing revenue was derived from the U.S., with 3% from Europe. The following is an approximate distribution of revenue:

New England	19%
Middle Atlantic	41
East North Central	7
South Atlantic	7
West South Central	2
Mountain States	1
Pacific	20
International	<u>3</u>
	100%

- U.S. branch offices are located in Arlington (VA), Atlanta, Bellevue (WA), Cambridge (MA), Charlotte (NC), Chicago, Cincinnati, Cleveland, Dallas, Denver, Detroit, Elizabeth (NJ), West Hartford (CT), Houston, Kansas City, Los Angeles, Minneapolis, Newport Beach (CA), New York City, Norwalk (CT), Philadelphia, Phoenix, Pittsburg, Portland, Rochester (NY), St. Louis, San Diego, San Francisco, Santa Clara (CA), Stamford (CT), Tampa, and Wauwatosa (WI).
- International offices are located in Paris, Stockholm, Sydney, Huchbruckenstrasse (West Germany), and London, Manchester, and Croyden, Surrey (U.K.).

COMPANY HIGHLIGHT

PANSOPHIC SYSTEMS, INC.

709 Enterprise Drive
Oakbrook, IL 60521
(312) 986-6000

David J. Eskra, President

Public Corporation, OTC

Total Employees: 350

Total Revenue, Fiscal Year End

4/30/82: \$35,500,000

THE COMPANY

- Founded in 1969, Pansophic (PSI) develops and markets systems software for use on IBM and PCM mainframes with minor offerings on Univac, Siemens, Hitachi, and FACOM systems. It has recently added some applications products to its offerings. PSI sells to a very high quality customer base of over 5,000 customers in 45 countries with 35% of revenue derived from foreign sources.
- In 1982 PSI acquired exclusive rights to two more systems products (SLICK and DWC from NCI), which have a combined user base of 700 users. A late 1981 stock offering was used to retire a \$6.8 million outstanding debt. 760,500 shares of the 7,386,000 issued were offered at that time. Revenue for the 1978-1982 period has grown at an AAGR of 34%. Net income over the same period has grown 50%.

PANSOPHIC SYSTEMS, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Revenue	\$35.5	\$30.1	\$23.2	\$16.7	\$11.0
• Percent increase from previous year	18%	29%	39%	52%	54%
Net income	\$4.6	\$2.5	\$1.5	\$1.3	\$0.9
• Percent increase from previous year	84%	61%	16%	42%	17%

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1977</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Software products	\$4.6	\$15.3	27%
Customer support	1.2	9.7	51
International	<u>1.3</u>	<u>10.5</u>	<u>51</u>
Total	\$7.1	\$35.5	38%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Software products	25%	\$15	\$19	\$23	\$29	\$37
Customer support	11	10	11	12	14	15
International	<u>34</u>	<u>11</u>	<u>14</u>	<u>19</u>	<u>26</u>	<u>35</u>
Total company size	25%	\$36	\$44	\$54	\$69	\$87

1986 MARKET SHARE

- Systems software market 1.4%.

COMPANY HIGHLIGHT

PLANNING RESEARCH CORPORATION
 1850 K Street, NW
 Washington, DC 20006
 (202) 293-4700

John M. Toups, President
 Public Company, NYSE
 Total Employees: 6,200
 2,100 (Government Information Systems)
 800 (Computer Systems)
 Total Revenue, Fiscal Year End
 6/30/82: \$153,400,000

THE COMPANY

- Begun in 1954 as an operations research and think tank company, PRC has grown through acquisition to cover:
 - Planning, economics, engineering, and architectural professional services to government, business, and industry.
 - Information sciences/services and management consulting services, providing processing services, professional services, turnkey systems, micrographics, and facilities management.
- The company was reorganized into four groups in 1981: Government Information Systems, Computer Systems, Engineering, and Systems Services. The change in organization is reflected in the revenue and income figures below. In 1982 PRC sold Central Software (a CICS productivity tool) to Pansophic.

PLANNING RESEARCH CORPORATION FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

FISCAL YEAR ITEM	1982	1981	1980	1979	1978
Information services only					
Revenue	\$ 153.4	\$ 132.7	\$ 130.2	\$ 128.1	\$ 115.3
. Percent increase from previous year	16%	2%	2%	11%	32%
Operating income	\$ 12.3	\$ 8.4	\$ 5.6	\$ 5.7	\$ 4.4
. Percent increase (decrease) from previous year	46%	50%	(3%)	29%	87%

SERVICE TYPE AND DELIVERY MODE

- PRC's information services are varied and specific and do not, as a rule, address commercial markets, with the exception of PRC's Realty Systems (see Industry Sectors Served below). PRC's attempts to penetrate commercial markets (e.g., their software product Central Software, their turnkey systems operations in the U.K.) have met with failure.
- Turnkey systems are principally sold by PRC Public Management services based on DEC PDP 11 series, providing communications, automated dispatch, and control systems. PRC Realty Systems' attempts to sell turnkey systems to its realtor clients have not been successful so far.
- Professional services are PRC's largest source of business, particularly the 1,000-man team contract to NASA now in its eighth year.
 - Facilities management contracts are at present small in number and large in volume.
 - Micrographics contracts include U.S. Navy personnel records and the NCR document control.

INDUSTRY SECTORS SERVED

- Government is the single largest professional services market for PRC including software conversion (e.g., the recent \$20 million contract for upgrading/replacing 150 Burroughs systems that supply logistics support and administrative management to USAF worldwide), facilities management (e.g., the \$22 million contract for NASA's HQ in Washington), turnkey systems (e.g., the automated dispatch and command/control system for fire, police, ambulance, and bus fleets), and on-line and batch processing. This sector accounted for 65% of PRC's 1981 revenue. The dominance of foreign, local, and federal government business is shown by the following: in 1981, revenue sources were U.S. government/military 21%, U.S. government/nonmilitary 22%, U.S. state and local government 16%, foreign governments 12%, all other sectors 29%.

INTERNATIONAL MARKETS SERVED

- PRC serves a wide geographic area covering Australia, Hong Kong, the Philippines, Western Europe, Canada, Puerto Rico, and Venezuela. The middle East has once again become an important sector to PRC after its significant losses in Iran. PRC operates in 25 country markets.

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1981</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Processing services	\$ 47.6	\$ 46.7	(2%)
Professional services	77.8	99.5	28
Turnkey systems	<u>7.3</u>	<u>7.2</u>	<u>(1%)</u>
Total	\$ 132.7	\$ 153.4	16%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Processing services	5%	\$ 47	\$ 49	\$ 52	\$ 54	\$ 57
Professional services	15	100	115	132	152	175
Turnkey systems	<u>2</u>	<u>7</u>	<u>7</u>	<u>7</u>	<u>7</u>	<u>8</u>
Total company size	12%	\$154	\$171	\$191	\$213	\$240

1986 MARKET SHARE

- Realty Systems market 65%; Professional Services 2.3%. Total computer services market share 0.8%.

POTENTIAL IMPACT OF ECONOMY

- The principal part of the U.S. economy that PRC is interested in is the U.S. government/military, which is slated for significant expenditures, if approved by Congress. PRC's contracts with this sector (and others) are multiyear and therefore immune from recession in the short term. The principal impact will be on the real estate services from Realty Systems, which are not technologically advanced and are vulnerable.

POTENTIAL IMPACT OF COMPETITION

- CSC, Hughes Aircraft, EDS, and a number of smaller professional services companies are the main competitors of PRC in government markets, both in the U.S. and abroad. Again, the multiyear contracts protect PRC in the short term, but CSC and EDS are fearsome competitors for PRC and are increasing in strength year by year. In the realty systems market, PRC already has the largest share. PRC still does not know how to sell in the commercial marketplace, however, as demonstrated by their abandonment of Central Software (an excellent product) and their European commercial operations.

POTENTIAL IMPACT OF TECHNOLOGY

- PRC's many divisions use technology and apply it. They do not develop or sell it. As a people/expertise company PRC is immune from technological developments in all areas other than Realty Systems, where its own software is state of the art.

SUMMARY

- An attractive acquisition candidate: multiyear contracts protecting revenue base; dominant positions in several specialist markets; business split into many legally separate entities facilitating selective merger, acquisition, or divestiture. The market capitalization (\$135 million) has tripled since INPUT's last recommendation and now looks overpriced. PRC may be open to divesting part of its business, however, particularly PRC Realty Systems.

COMPANY HIGHLIGHT

QUOTRON SYSTEMS, INC.
5454 Beethoven Blvd.
Los Angeles, CA 90066
(213) 827-4600

Milton E. Mohr, President
Public Corporation, OTC
Total Employees: 858
Total Revenue, Fiscal Year End
12/31/82: \$120,918,000
Computer Services Revenue
\$110,436,000
Market Value: \$867 million

THE COMPANY

- Founded in 1957, Quotron Systems, Inc. provides financial information services to 4,800 customer locations for a monthly fee through a private nationwide data communications network (CARS) to brokerage firms, banks, insurance companies, and security, option, and commodity exchanges. The Quotron 800 system will be gradually replaced by the Motorola 68000-based Quotron 1000 system that is UNIX-based.

QUOTRON SYSTEMS, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ thousands, except per share data)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Revenue	\$ 120,918	\$ 88,120	\$ 63,809	\$ 47,415	\$ 39,379
• Percent increase from previous year	37%	38%	35%	20%	18%
Net income	\$ 17,035	\$ 12,485	\$ 8,909	\$ 7,017	\$ 4,470
• Percent increase from previous year	36%	40%	27%	57%	(8%)

JOINT VENTURE

- Continental Corporation provides the joint venture with startup debt financing. Quotron provides execution management, technical and hardware support, communications design, and customer services and support. The venture developed slowly in 1982.

HISTORICAL GROWTH BY SEGMENT

- Ninety-one percent of Quotron's fiscal year 1982 total revenue is related to computer services. Of the computer services revenue, 93% is interactive processing (data base inquiry), 2% is derived from professional services, and 5% from the joint venture with American Telephone and Telegraph.
- The contribution of computer services revenue for the past five years is as follows:

<u>Segment</u>	<u>1978</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Processing services	\$33.8	\$ 98.5	31%
Professional services	0.2	2.0	78
Other	<u>2.0</u>	<u>9.9</u>	<u>49</u>
Total	\$36.0	\$ 110.4	32%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Processing services	28%	\$ 98	\$125	\$160	\$205	\$263
Professional services	30	2	3	3	4	6
Other	<u>25</u>	<u>10</u>	<u>12</u>	<u>16</u>	<u>20</u>	<u>24</u>
Total company size	28%	\$110	\$140	\$179	\$229	\$293

EMPLOYEES

- Quotron's total employees are divided by function as follows:

Marketing	47
Customer support	353
Computer operations	33
Software	88
Engineering and manufacturing	272
General and administrative	<u>65</u>
	858

COMPETITORS

- Quotron's primary competition comes from Bunker Ramo and GTE Telenet Information Services, Inc.

INDUSTRY MARKETS

- Brokerage houses are the major source of Quotron's computer services revenue, as reflected below.

Banking and finance		95%
Commercial banks	5%	
Brokerage	85	
Other	5	
Insurance		<u>5</u>
		100%

GEOGRAPHIC MARKETS

- Computer services revenue comes primarily from the eastern U.S. The company does have installations of its system in London and Hong Kong, but foreign operations contributed an insignificant amount to computer service revenue.
 - In April 1981 Quotron announced a joint venture with Associated Press and Dow Jones & Company for the international marketing of its financial information service. The service will be marketed through AP-Dow Jones outside North America, Hawaii, and Puerto Rico. AP-Dow Jones will be responsible for maintenance and technical support. Quotron expects significant growth in this market.

COMPANY HIGHLIGHT

REYNOLDS AND REYNOLDS COMPANY
800 Germantown Street
Dayton, OH 45407
(513) 443-2000

Terry D. Carder, President
Public Company, OTC
Total Employees: 3,349 (Total Company)
1,300 (Computer Services)
Total Revenue, Fiscal Year End
9/30/82: \$116,800,000

THE COMPANY

- Reynolds was founded in 1866 to manufacture and distribute standard and custom business forms. Batch and remote computing services, turnkey systems, and microprocessor-based terminals are also offered now. Computer systems and services now account for nearly 60% of total company turnover.
- Over the 1978-1982 period, revenue grew at an AAGR of 13% (and in excess of 35% in each of the years 1977-1979). In 1980 a significant drop in earnings and revenue growth occurred as the number of automotive dealers going out of business increased (1,870). The deterioration continued in 1981 when computer systems revenue fell for the first time.

REYNOLDS AND REYNOLDS COMPANY
FIVE-YEAR FINANCIAL SUMMARY
(\$ millions)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
<u>Computer Systems Only</u>					
Revenue	\$ 116.8	\$ 112.4	\$ 122.6	\$ 102.4	\$ 71.0
• Percent increase (decrease) from previous year	4%	(8%)	20%	44%	47%
<u>Total Company</u>					
Net income	\$ 7.8	\$ 7.1	\$ 11.0	\$ 14.8	\$ 12.0
• Percent increase (decrease) from previous year	10%	(35%)	(26%)	24%	22%

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1978</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Processing services	\$45.2	\$ 42.3	(2%)
Integrated systems	15.6	50.6	34
Other (terminal sales)	<u>10.2</u>	<u>23.9</u>	<u>24</u>
Total	\$71.0	\$ 116.8	13%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Processing services	5%	\$ 42	\$ 44	\$ 46	\$ 49	\$ 51
Integrated systems	19	51	61	72	86	102
Terminal sales	<u>25</u>	<u>24</u>	<u>30</u>	<u>38</u>	<u>47</u>	<u>59</u>
Total company size	16%	\$117	\$135	\$156	\$182	\$212
International	27	9	11	15	18	23

1986 MARKET SHARE

- The total market for R&R's largest service (automotive) shrank in 1982. R&R's share of the market will remain constant at 12%.

COMPANY HIGHLIGHT

SAFEGUARD BUSINESS SYSTEMS, INC.

400 Maryland Drive
Fort Washington, PA 19034
(215) 641-5000

Vincent G. Bell, Jr., Chairman
President and CEO
Public Corporation, NYSE
Total Employees: 1,800
Total Revenue, Fiscal Year End
12/31/82: \$137,052,000
Computer Services Revenue:
\$19,283,000

THE COMPANY

- Safeguard Business Systems, Inc. (SBS) was formed in March 1980 as a spinoff from its former parent, Safeguard Scientific, Inc. It now operates as an independent public corporation trading on the New York Stock Exchange.
- SBS provides batch-oriented processing services to small- and medium-sized businesses. The company also designs and markets manual, one-write accounting and record keeping systems, and manufactures and distributes business forms. SBS is developing microcomputer-based systems for use in small business, accounting, and health care offices, scheduled for availability in late 1982.
- In 1981 and 1982, 135,000 new customers were added. Services and products are now supplied to over 625,000 accounts.

SAFEGUARD BUSINESS SYSTEMS, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ thousands, except per share data)

FISCAL YEAR		1982	1981	1980	1979	1978
ITEM						
Revenue		\$ 137,052	\$ 128,010	\$ 112,907	\$ 92,308	\$ 68,421
• Percent increase from previous year		7%	13%	22%	35%	23%
Net income		\$ 9,194	\$ 8,753	\$ 7,513	\$ 6,309	\$ 4,736
• Percent increase from previous year		5%	17%	19%	33%	38%

SAFEGUARD BUSINESS SYSTEMS, INC.

- As of December 31, 1982, SBS had approximately 1,800 employees. There are currently the same number of employees, divided as follows:

Data processing services	580
One-write systems	800
Business forms	300
Administration	<u>120</u>
	1,800

- SBS's principal competitors for services to accountants include the Accounting Corporation of America and Automatic Data Processing (ADP). Payroll services competitors include ADP and PAYCHEX. Health care services competitors are regionalized with no single company competing on a national level.

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1979</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Data processing	\$10.3	\$ 19.3	23%
One-write systems	64.6	98.7	15
Business forms	<u>17.4</u>	<u>19.1</u>	<u>3</u>
Total	\$92.3	\$ 137.1	14%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Processing services	20	19	23	27	33	39

INDUSTRY MARKETS

- The company markets its computer services to accountants (57% of revenue) and to doctors and dentists (21% of revenue). The remaining 22% of revenue is derived from lawyers, small businesses, and other commercial clients.

GEOGRAPHIC MARKETS

- SBS estimates that 1981 revenue was derived as follows:

United States	94%
Canada	4
United Kingdom	<u>2</u>
	100%

SAFEGUARD BUSINESS SYSTEMS, INC.

- SBS maintains regional offices in Atlanta, Boston, Chicago, Costa Mesa, Los Angeles, San Francisco, Dallas, Philadelphia, Montreal, Toronto, Vancouver, and Winnipeg.

COMPANY HIGHLIGHT

SCIENCE APPLICATIONS, INC.
1200 Prospect Street
La Jolla, CA 92137
(714) 454-3811

J. R. Beyster, President
Privately Held
Employees: 683 (Information Services Only)
Total Revenue, Fiscal Year End
1/31/82: \$49,000,000

THE COMPANY

- Founded in 1969, SAI offers technical services in the fields of applied science, military software development, and military systems. Recently SAI has expanded into the energy, environment, and health sectors. SAI also assembles custom-built, special-purpose computer systems and manufactures products that are the outgrowth of software development.
- Between 1976 and 1982, SAI grew computer services revenue at an AAGR of 14%. Total 1982 companywide revenue was \$290 million.

SCIENCE APPLICATIONS, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Revenue	\$49	\$47.6	\$42	\$39	\$34
• Percent increase from previous year	3%	13%	7%	15%	N/A

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1976</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Total company	\$45.9	\$290	36%
Total computer services	22.2	49	14

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR (percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Professional services	15%	\$49	\$56	\$65	\$75	\$86

1986 MARKET SHARE

- Less than 1%.

COMPANY HIGHLIGHT

SEI CORPORATION

680 E. Swedesford Road
Wayne, PA 19087
(215) 687-1700

Alfred P. West, Jr., President
Public Corporation, OTC
Total Employees: 459
Total Revenue, Fiscal Year End
12/31/82: \$39,737,000
Market Value: \$143 million

THE COMPANY

- SEI Corporation, founded in 1971, offers a complete interactive personal trust information system on a remote computing basis and a minicomputer-based turnkey trust accounting system. It is the leading computer services vendor of trust automation systems.
- In December 1982 SEI acquired all of the outstanding stock of TMI Systems Corporation for cash value of nearly \$13 million.

SEI CORPORATION FIVE-YEAR FINANCIAL SUMMARY (\$ thousands, except per share data)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Revenue	\$ 39,737	\$ 32,667	\$ 23,060	\$ 18,208	\$ 14,372
• Percent increase from previous year	22%	42%	27%	27%	73%
Net income	\$ 3,728	\$ 2,545	\$ 1,546	\$ 1,103	\$ 856
• Percent increase from previous year	46%	65%	40%	29%	9%

- The company's principal competitors include Bradford National Corporation, National Computer Systems, Inc., NMF Incorporated (a subsidiary of Sun Information Services), and Key Financial Systems, Inc.
- As of December 31, 1982, the company had 459 full-time employees, functionally divided as follows:

Marketing	36
Customer administration	64
Development	72
Product planning	8
Operational support	128
Installations	49
Training	10
Administrative	<u>92</u>
	459

HISTORICAL GROWTH BY SEGMENT

- Ninety-five percent of SEI's 1982 revenue was derived from processing services and 5% from turnkey system sales.

<u>Segment</u>	<u>1978</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Processing services	\$14.4	\$37.7	27%
Turnkey systems	<u>-</u>	<u>2.0</u>	<u>NA</u>
Total	\$14.4	\$39.7	29%

- In January 1982 the subsidiary began furnishing automated services that perform daily sweeps of trust account cash balances, investing available cash in Trust Funds Liquid Asset Trust, a no-load, open-end money market fund managed by SEI Financial Services and advised by Thorndike, Doran, Paine, and Lewis. SEI has 81 clients using this service.
- Later this year SEI expects to start other funds and initiate security execution services through SEI Financial Services.

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Processing services	22%	\$38	\$47	\$57	\$69	\$ 85
Turnkey systems	30	2	3	3	4	6
Other (trust fund)	<u>50</u>	<u>-</u>	<u>10</u>	<u>15</u>	<u>22</u>	<u>34</u>
Total company size	33%	\$40	\$60	\$75	\$95	\$125

INDUSTRY MARKETS

- One hundred percent of SEI's revenue is derived from the banking and financial industry, both from trust departments of commercial banks and trust and title companies.

GEOGRAPHIC MARKETS

- Virtually all of SEI's business is concentrated in the United States. SEI maintains offices in Philadelphia, Chicago, and Los Angeles.

COMPANY HIGHLIGHT

SEISMOGRAPH SERVICES CORPORATION

6200 E. 41st Street
Tulsa, OK 74102
(918) 627-3330

R. C. Anderson, President
Subsidiary of Raytheon
Total Employees: 2,000 (Computer Services Only)
Total Revenue, Fiscal Year End 12/31/83: \$57,900,000

THE COMPANY

- Formed in 1935 and acquired by Raytheon in 1966, Seismograph offers radio location, well logging, seismic surveys, seismic data processing (on-site and batch), and software products (Phoenix system) in the U.S., South America, Western Europe, and the Far East.
- Raytheon does not release financial data on subsidiaries. The following data was obtained from an interview.

SEISMOGRAPH SERVICES CORPORATION FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Total service revenue	\$57.9	\$56	\$51	\$46	\$41
• Percent increase from previous year	3%	10%	12%	12%	N/A
Net income	-----NOT AVAILABLE-----				
• Percent increase from previous year					

HISTORICAL GROWTH BY SEGMENT

- Ninety-eight percent of computer services revenue is estimated to come from processing services and 2% from the sale of software products to oil companies. Twenty-five percent of revenue comes from foreign operations.

SEISMOGRAPH SERVICES CORPORATION

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR (percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Processing services	10%	\$58	\$64	\$70	\$77	\$85
Software products	<u>27</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>2</u>	<u>3</u>
Total company size	10%	\$59	\$65	\$72	\$79	\$88

1986 MARKET SHARE

- Estimated 5% of seismic processing.

COMPANY HIGHLIGHT

SHARED MEDICAL SYSTEMS

650 Park Avenue
King of Prussia, PA 19406
(215) 265-7600

Harvey J. Wilson, President
Public Company, OTC
Total Employees: 1,919
Total Revenue, Fiscal Year End
12/31/82: \$165,800,000

THE COMPANY

- Formed in 1969 to provide information services to the hospital industry by former IBM marketing staff engaged in selling in-house systems to that market, SMS became a public corporation in 1976.
- SMS is the largest vendor to the hospital industry offering remote computing and minicomputer-based services and has produced a revenue AAGR of 27% over the 1978-1982 period. Net income grew by the equivalent AAGR of 26%.

SHARED MEDICAL SYSTEMS FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Revenue	\$ 165.8	\$ 131.6	\$ 106.6	\$ 82.8	\$ 63.1
• Percent increase from previous year	26%	24%	29%	31%	38%
Net income	\$ 21.4	\$ 16.6	\$ 13.3	\$ 10.8	\$ 8.6
• Percent increase from previous year	29%	25%	23%	25%	27%

SERVICE TYPE AND DELIVERY MODE

- Processing services provide the basic accounting applications required by hospitals through batch and interactive modes. Seventy-five percent of the hospitals served use the interactive mode.
- Minicomputer-based turnkey systems are offered for hospitals requiring standalone capabilities. Most use it as an entry node to the network, however.
- During 1980 a new group practices Physicians Service System (turnkey) was introduced. In 1981 the Nursing System was announced offering productivity tools, interhospital communications, station personnel planning, and education/training services. In 1982 SMS introduced a Laboratory System and the attachment of personal computers to the SMS network.

INTERNATIONAL MARKETS SERVED

- SMS established SMS International to offer SMS products outside North America, but very little revenue is expected before the end of the 1980s.

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1976</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Processing services	\$31.9	\$143.2	28%
Turnkey systems	1.7	19.2	50
Maintenance and repairs	<u>1.9</u>	<u>3.4</u>	<u>10</u>
Total	\$35.5	\$165.8	29%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Processing services	28%	\$143	\$183	\$234	\$300	-\$384
Turnkey systems	22	19	23	28	35	42
Maintenance and repairs	<u>10</u>	<u>4</u>	<u>4</u>	<u>5</u>	<u>5</u>	<u>6</u>
Total company size	27%	\$166	\$210	\$267	\$340	\$432

POTENTIAL IMPACT OF ECONOMY

- The health care sector is relatively immune from economy downturns, but the expenditure patterns from the sector are not. It is expected, therefore, that the interactive and batch processing services will continue to grow but that turnkey system sales will be slowed. SMS is also deemphasizing turnkey systems.

POTENTIAL IMPACT OF COMPETITION

- The principal competitor of SMS is MCAUTO in the processing services portion of the health care services market. Various in-house systems based on minicomputers are offered by IBM, Technicon, HBO, and Tymshare. However, SMS is now moving into advanced patient/health care systems where each data element is entered only once for multiple applications (integrated system) and data is provided via the network to government agencies, medicare, insurance companies, and hospital supply vendors as well as to the hospital itself. No one else is doing this.

POTENTIAL IMPACT OF TECHNOLOGY

- The principal technology developments that will affect the market are software developments. These do not occur rapidly so that any changes will have a gradual effect. SMS's own R&D efforts are substantial in this regard and seem capable of maintaining the company's market leadership. R&D expenditures will top \$12 million this year.

SUMMARY

- An excellent acquisition candidate.

COMPANY HIGHLIGHT

SUN INFORMATION SERVICES (SIS)

680 E. Swedesford Road
Wayne, PA 19087
(215) 293-9600

John M. Ryan, President
Former Subsidiary of Sun Co. Inc.
Total Employees: 1,200
Total Revenue, Fiscal Year End
12/31/82: Not known

THE COMPANY

- o SIS was formed in 1975 by its parent to provide external computing services in addition to supporting internal and affiliated company IS requirements. SIS presently provides software and processing services to the banking industry, offers a disaster recovery service, and provides general remote computing services.
- o In September 1982 all of SIS (except the Weiland Computer Group) was divested to senior management and a group of investors led by Welsh, Carson, Anderson and Stowe and J. H. Whitney and Company. Weiland was sold to another investor.

COMPANY HIGHLIGHT

SYSCON CORPORATION

1000 Thomas Jefferson Street, N.W.
Washington, DC 20007
(202) 342-4000

Jose J. Yglesias, President
Public Company, OTC
Total Employees: 1,450
Total Revenue, Fiscal Year End
\$71,400,000

THE COMPANY

- Syscon specializes in DOD-related systems engineering and software services. Approximately 88% of the business can be classified as computer services.
- Revenue growth over the 1976-1980 period was at an AAGR of 25%. Contracts are generally in the \$1 million plus size. Significant contracts include an \$11 million one for the Navy (three-year duration) for software design/systems integration. Syscon specializes in ship-based combat weapons systems.

SYSCON CORPORATION FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Revenue	\$ 71.4	\$ 61.1	\$ 52.4	\$ 44.3	\$ 38.3
• Percent increase from previous year	17%	17%	18%	16%	N/A
Net income	\$ 2.8	\$ 2.4	\$ 1.9	\$ 1.8	\$ 1.5
• Percent increase from previous year	15%	31%	4%	19%	N/A

SYSCON CORPORATION

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1980</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Systems engineering	\$ 5.5	\$12.9	53%
Computer systems	20.0	26.5	15
Facilities management	2.5	1.8	(16%)
Technical services	24.2	28.8	9
Hardware/software products	<u>0.2</u>	<u>1.4</u>	<u>165</u>
Total	\$ 52.4	\$71.4	17%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Professional services	35%	\$68	\$92	\$124	\$167	\$226
Turnkey and other	<u>15</u>	<u>3</u>	<u>3</u>	<u>4</u>	<u>5</u>	- <u>5</u>
Total company size	34%	\$71	\$95	\$128	\$172	\$231

1986 MARKET SHARE

- Professional Services 1.8%

COMPANY HIGHLIGHT

SYSTEMATICS, INC.

4001 Rodney Parham Road
Little Rock, AR 72212
(501) 223-5100

Ray Maturi, President
Public Corporation, OTC
Total Employees: 1,489
Total Revenue, Fiscal Year End
5/31/83: \$63,000,000*
Market Value: \$198 million

THE COMPANY

- Founded in 1968, Systematics, Inc. provides facilities management (FM) processing services to the commercial banking industry. In 1980 the company also began marketing applications software to banks.
- In August 1982 Systematics purchased St. Joseph Systems, Inc., which markets software and processing services to bank trust departments.

SYSTEMATICS, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ thousands, except per share data)

ITEM \ FISCAL YEAR	5/82	5/81	5/80	5/79	5/78
Revenue	\$ 49,308	\$ 36,335	\$ 30,284	\$ 24,428	\$ 18,211
• Percent increase from previous year	36%	20%	24%	34%	37%
Net income	\$ 3,236	\$ 1,993	\$ 1,327	\$ 958	\$ 670
• Percent increase from previous year	62%	50%	39%	43%	38%

- Systematics' 1,489 employees are segmented approximately as follows:

Managerial	156
Technical specialists	423
Operating personnel	<u>910</u>
	1,489

- Major competitors for processing services are Electronic Data Systems and National Sharedata. The company's largest competitor in the software field is the Kirchman Corporation.

*INPUT estimate

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1978</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Processing FM	\$18.2	\$47.3	27%
Applications software	<u>-</u>	<u>2.0</u>	<u>NA</u>
Total	\$18.2	\$49.3	28%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Processing FM	25%	\$47	\$58	\$73	\$92	\$115
Software products	<u>30</u>	<u>2</u>	<u>3</u>	<u>3</u>	<u>4</u>	<u>6</u>
Total company size	25%	\$49	\$61	\$76	\$96	\$121

INDUSTRY MARKETS

- Substantially all of Systematic's fiscal 1982 revenue was derived from commercial banks.

GEOGRAPHIC MARKETS

- One hundred percent of Systematics' fiscal 1982 revenue was derived from the U.S.

COMPANY HIGHLIGHT

SYSTEMS & COMPUTER TECHNOLOGY, INC.

Great Valley Corporate Center
4 Country View Road
Malvern, PA 19355
(215) 647-5930

Frederick A. Gross, President
Public Company, OTC
Total Employees: 743
Total Revenue, Fiscal Year End
9/30/82: \$29,500,000

THE COMPANY

- Systems & Computer Technology Corporation (SCT) was founded in 1968 to provide professional services and facilities management to educational institutions, both public and private, and to state and local governments. All of SCT's revenue derives from these two markets and all is earned within the U.S.
- SCT offered an initial public offering of its common stock on November 2, 1982. There are approximately 11.2 million shares outstanding.

SYSTEMS & COMPUTER TECHNOLOGY, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

FISCAL YEAR ITEM	1982	1981	1980	1979	1978
Revenue	\$29.5	\$19.5	\$16.3	\$13.3	\$10.2
• Percent increase from previous year	51%	20%	23%	30%	61%
Net income	\$3.7	\$1.6	\$1.2	\$1.0	\$0.8
• Percent increase from previous year	126%	41%	18%	26%	83%

PROJECTED GROWTH BY SEGMENT

Segment	AAGR (percent)	Fiscal Year (\$ millions)				
		1982	1983	1984	1985	1986
Professional services	22%	\$30	\$37	\$45	\$54	\$67

1986 MARKET SHARE

- Less than 1%.

COMPANY HIGHLIGHT

TRW INFORMATION SERVICES

505 City Parkway West
Orange, CA 92668
(714) 937-2000

Edward J. Brennan Jr., Vice President,
GM

Division of TRW Electronics Group
Part of TRW, Inc.

Total Employees: 1,450

Total Revenue, Fiscal Year End
12/31/82: \$72,000,000*

THE COMPANY

- TRW Information Services is composed of TRW Consumer Credit Data (consumer credit check) and TRW Business Credit Data Services (BCD), which operates the National Credit Information Service for the National Association of Credit Management, an association of 43,000 members. An earlier division - Validata, a service for verifying and guaranteeing checks and credit cards used at retail cash positions, was sold to Tymshare in 1979. Consumer Credit grew rapidly at 20%+ per annum until 1979.

TRW INFORMATION SERVICES FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

FISCAL YEAR ITEM	1982	1981	1980	1979	1978
Revenue	\$72	\$68	\$62	\$62	\$56
• Percent increase from previous year	6%	10%	0%	11%	24%
Net income • Percent increase from previous year	-----Not available, but it is known that CCD is----- profitable and BCD broke even in 1980				

SERVICE TYPE AND DELIVERY MODE

- All revenue from both services is derived from on-line inquiry/response based on access to the data bases of business and consumer credit held on the computer in Anaheim (CA). Customer equipment includes 9,000 teleprinters, and subscribers are also serviced through 45 credit bureaus and 21 offices nationwide.
- The network used is provided by both TRW (private network) and Tymshare, and includes 1,000 low-speed line nodes in 53 cities and 58 high-speed lines covering 9,000 air miles.

*INPUT estimate

INDUSTRY SECTORS SERVED

- TRW will not provide industry sector data, but distribution is the primary revenue source for CCD. Geographically, most revenue is derived from West Coast and Northeast locations:

Northeast	35%
West Coast	35
All other	<u>30</u>
	100%

INTERNATIONAL MARKETS SERVED

- None.

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1977</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
CCD	\$43	\$54	5%
BCD	<u>2</u>	<u>18</u>	<u>55</u>
Total	\$45	\$72	10%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
CCD processing	10%	\$54	\$59	\$65	\$ 72	\$ 79
BCD processing	<u>25</u>	<u>18</u>	<u>23</u>	<u>28</u>	<u>35</u>	<u>44</u>
Total company size	14%	\$72	\$82	\$93	\$107	\$123

COMPANY HIGHLIGHT

TELECREDIT, INC.
1901 Avenue of the Stars
Los Angeles, CA 90067
(213) 277-4061

Lee A. Ault, President
Public Corporation, OTC
Total Employees: 768
Total Revenue, Fiscal Year End
4/30/82: \$57,861,000
Market Value: \$148 million

THE COMPANY

- Telecredit was incorporated in 1961 to provide computerized check verification services in California. Check guarantee, collection services, point-of-sale terminal support, and credit card authorization and processing services were subsequently added. Telecredit is the national leader in check guarantee, authorizing more than \$2 billion worth of checks annually.
- Telecredit now markets these services to retail merchants, banks, credit unions, savings and loans, hotels, automobile dealers, hospitals, and other industries nationwide. In 1982 the company began providing home banking services, whereby customers pay bills and transfer funds using a Telecredit terminal.

TELECREDIT, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ thousands)

ITEM \ FISCAL YEAR	4/82	4/81	4/80	4/79	4/78
Revenue	\$ 57,861	\$ 45,581	\$ 38,435	\$ 31,830	\$ 24,698
• Percent increase from previous year	27%	19%	21%	29%	26%
Net income	\$ 3,330	\$ 2,747	\$ 741	\$ 1,470	\$ 817
• Percent increase (decrease) from previous year	21%	271%	(50%)	80%	(51%)

EMPLOYEES

- As of April 1981, Telecredit had 768 full-time employees, distributed approximately as follows:

Marketing and sales	270
Computer operations	340
General and administrative	<u>158</u>
	768

KEY PRODUCTS AND SERVICES

- Telecredit provides check authorization services, card transaction processing services, patent licenses, and collection services. Over 100,000 retail outlets use Telecredit services.

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1978</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Processing services	\$24.3	\$55.4	23%
Other (interest)	<u>0.4</u>	<u>2.5</u>	<u>58</u>
Total	\$24.7	\$57.9	24%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Processing services	25%	\$55	\$69	\$86	\$107	\$134
Other	<u>30</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>7</u>	- <u>9</u>
Total company size	25%	\$58	\$73	\$91	\$114	\$143

GEOGRAPHIC MARKETS

- Almost 100% of Telecredit's revenue is derived from the U.S., with an insignificant amount coming from Canada and South America. Heaviest concentrations are in major metropolitan areas of California, Florida, Massachusetts, New York, Texas, and the District of Columbia.
- Telecredit markets its credit card and checking services through 14 sales offices nationwide.

COMPANY HIGHLIGHT

TIME SHARING RESOURCES, INC.
 777 Northern Boulevard
 Great Neck, NY 11021
 (516) 487-0101

Joseph F. Hughes
 Chairman and President
 Public Corporation, OTC
 Total Employees: 130
 Total Revenue, Fiscal Year End
 5/31/82: \$12,422,000
 Market Value: \$8 million

THE COMPANY

- Founded in 1969, Time Sharing Resources, Inc. (TSR) provides timesharing and decision support services to over 350 organizations. Through subsidiary operations, TSR also provides contract programming, consulting, and specialized data processing services.

TIME SHARING RESOURCES, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ thousands, except per share data)

ITEM \ FISCAL YEAR	5/82	5/81	5/80	5/79	5/78
Revenue	\$ 12,422	\$ 8,211	\$ 5,100	\$ 5,657	\$ 4,638
• Percent increase (decrease) from previous year	51%	61%	(10%)	22%	72%
Net income	\$ 973	\$ 600	\$ 416	\$ 850	\$ 746
• Percent increase (decrease) from previous year	62%	44%	(51%)	14%	159%

- In March 1981 TSR acquired the assets of CDP Marketing Information Corporation, a company specializing in bank information processing.
- As of November 1981, TSR's employees were segmented as follows:

Sales and marketing	45
Software services/customer support	40
Computer operations	30
General and administrative	<u>15</u>
	130

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1978</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Interactive processing services	\$4.6	\$11.4	26%
Professional services	<u>-</u>	<u>1.0</u>	<u>NA</u>
Total	\$4.6	\$12.4	28%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Processing services	25%	\$11	\$14	\$17	\$22	\$27
Professional services	<u>30</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>2</u>	<u>3</u>
Total company size	26%	\$12	\$15	\$19	\$24	\$30

INDUSTRY MARKETS

- TSR has established a client base that covers a broad spectrum of commercial, financial, and government organizations. This base includes Fortune 1000 companies, oil and gas exploration companies, and clients from the banking and finance, manufacturing, utilities, and insurance industries.

GEOGRAPHIC MARKETS

- TSR derives 100% of its revenue from the United States. Offices are maintained in New York, Paramus, Philadelphia, Stamford, Miami, Dallas, Houston, and Los Angeles.

COMPANY HIGHLIGHT

TRIAD SYSTEMS, INC.
1252 Orleans Drive
Sunnyvale, CA 94088
(408) 734-9720

William W. Stevens, President
Publicly Held, OTC
Total Employees: 1,363
Total Revenue, Fiscal Year End
9/30/82: \$82,300,000

THE COMPANY

- Founded in 1972, Triad is an OEM delivering turnkey systems for inventory management to narrowly targeted industries with large numbers of small business units having complex inventory management problems. The auto parts industry has been the mainstay of Triad's sales, but it is seeking diversification into the retail hardware, warehousing, and time outlet industries.
- Weak retail sales and poor financial performance of small businesses took their toll in 1982 with net income falling 62% over the comparable period in fiscal 1981. Stepped up marketing and sales efforts nevertheless produced 14 large system deliveries and 800 jobber/warehouse automotive systems. R&D expenditure continued at a high level with \$8.7 million in 1982 compared to \$5.3 million in 1981.

TRIAD SYSTEMS, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

FISCAL YEAR ITEM	1982	1981	1980	1979	1978
Revenue	\$ 82.3	\$ 78.0	\$ 56.0	\$ 30.8	\$ 14.8
• Percent increase from previous year	6%	39%	81%	108%	103%
Net income	\$ 3.3	\$ 8.7	\$ 5.0	\$ 3.3	\$ 1.6
• Percent increase (decrease) from previous year	(62%)	74%	52%	106%	105%

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1977</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Integrated systems	\$6.2	\$69.6	62%
Maintenance	<u>1.1</u>	<u>12.7</u>	<u>63</u>
Total	\$7.3	\$82.3	62%

TRIAD SYSTEMS, INC.

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	AAGR (percent)	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Integrated systems	19%	\$70	\$83	\$ 99	\$118	\$140
Maintenance	<u>19</u>	<u>13</u>	<u>15</u>	<u>18</u>	<u>22</u>	<u>26</u>
Total company size	19%	\$83	\$98	\$117	\$140	\$166

1986 MARKET SHARE

- Integrated systems market 1.9%.

COMPANY HIGHLIGHT

TYMSHARE, INC.
20705 Valley Green Drive
Cupertino, CA 95014
(408) 446-6000

Thomas J. O'Rourke, President
Public Company, NYSE
Total Employees: 3,500
Total Revenue, Fiscal Year End
12/31/82: \$297,000,000
Market Value: \$238 million

THE COMPANY

- Since its founding in 1966, Tymshare has evolved from a remote computing services company specializing in scientific/engineering applications into a multiservice vendor providing data communications services, TK systems, software products, consulting, and third-party maintenance services, as well as processing services. Growth has been achieved primarily through acquisitions that have permitted entry into specialized, competitive markets such as medical systems, electronic funds transfer and other banking services, microwave transmission, and international markets such as the U.K., France, West Germany, and Japan.

TYMSHARE, INC. FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Revenue	\$297	\$ 290	\$ 235.9	\$ 193.1	\$ 149.6
• Percent increase from previous year	2%	23%	22%	29%	48%
Net income	\$ 8.8	\$ 15.7	\$ 18.7	\$ 14.6	\$ 10.6
• Percent increase (decrease) from previous year	(44%)	(16%)	28%	38%	32%

SERVICE TYPE AND DELIVERY MODE

<u>Service Type</u>	<u>Percent</u>	<u>Revenue Value 1982 (\$ millions)</u>
Processing services	68%	\$202
Software products	2	6
Professional services	3	9
Turnkey systems	3	9
Hardware (sales and rentals)	8	24
Tymnet	14	42
Other	<u>2</u>	<u>5</u>
	100%	\$297

INDUSTRY SECTORS SERVED

Banking and finance	16%
Services	27
Manufacturing	22
Utilities	11
Government	11
Medical	8
Distribution	<u>5</u>
	100%

INTERNATIONAL MARKETS SERVED

- Four percent of Tymshare's revenue is derived from international markets in Europe and Japan, through jointly owned operations in France (CEGOS, SLIGOS), the U.K. (Unilever), West Germany (Taylorix), Japan (Marubeni), and Belgium/Holland/Switzerland (also CEGOS). Of these markets, France would appear to be Tymshare's growth market due to good French PTT connections/agreements.

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1976</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
● Processing services	\$67.9	\$202	20%
● Software products	1.6	6	25
● Professional services	0.8	9	50
● Turnkey systems	-	9	N/A
● Hardware (sales and rental)	4.1	24	34%
● Tymnet	4.1	42	47%
● Other	<u>3.3</u>	<u>5</u>	<u>7%</u>
Total	\$81.8	\$297	24%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
● Processing services	17%	\$202	\$236	\$277	\$324	\$379
● Software products	25	6	8	9	12	15
● Professional services	35	9	12	16	22	30
● Turnkey systems	35	9	12	16	22	30
● Hardware (sales and rentals)	30	24	31	41	53	69
● Tymnet	18	42	50	58	69	81
● Other	<u>7</u>	<u>5</u>	<u>5</u>	<u>6</u>	<u>6</u>	<u>7</u>
Total company size	20%	\$297	\$354	\$423	\$508	\$611

1986 MARKET SHARE

- By 1986 Tymshare will have the following estimated U.S. market shares: Processing Services - 4.3%, Professional Services - 0.2%, Software Products - 0.2%, Data Network Services - 4.2%, all others - less than 1%.

POTENTIAL IMPACT OF ECONOMY

- Economic downturns will affect remote computing services and batch services, which represent 70% of Tymshare's business, but will have a lesser effect on medical services and data communications services, all of which are high growth markets. The manufacturing sector downturn is also of significance to Tymshare since it represents 20% of the clients. Tymshare's ScanSet terminal sales are the one bright spot in Tymshare's results.

POTENTIAL IMPACT OF COMPETITION

- Major competitors are:
 - Remote computing: GEISCO, SBC (CDC), National CSS (D&B), ADP, CSC.
 - Medical services: MCAUTO, Shared Medical, HBO & Company.
 - Accounting/tax: CCH Computax, Fastax, Computer Sciences, Reynolds & Reynolds.
 - Data communications: GTE and AT&T (and Bell operating companies).

POTENTIAL IMPACT OF TECHNOLOGY

- Hardware technology innovations will affect Tymshare's turnkey system markets (2%), hardware markets (14%), and microwave business when this market begins its consolidation phase.
- Software technology innovations are much slower to develop but have a potentially far greater significance to Tymshare's business. The diversity of Tymshare's software products represents an R&D and maintenance load on the company since they compete on so many different fronts. The company does not have the resources to maintain them all in the face of vertical market competition.

SUMMARY

- Tymshare participates in markets characterized by high growth, consolidation of competition, and powerful, financially solid competitors. All of Tymshare's competitors are big-league companies with huge resources. In this perspective Tymshare looks vulnerable. However, Tymshare has managed to build strong positions in key market areas such as Data Network Services from its own resources. Whether it can continue to compete successfully in all of its markets is doubtful. Therefore it is essential for Tymshare to concentrate on its core business (timesharing, network services) and divest itself of those not central to its business (loan servicing, credit/check verification, banking/services).

COMPANY HIGHLIGHT

UNIVERSITY COMPUTING COMPANY

UCC Tower
Exchange Park
Dallas, TX 75235
(214) 353-7100

J. Allen Hufft, President
Subsidiary of Wyly Corporation
Public Corporation: NYSE
Total Employees: 1,845
Total Revenue, Fiscal Year End
12/31/82: \$140,500,000
Market Value: \$167 million

THE COMPANY

- Wyly Corporation was formed in 1963 in Dallas. Through its wholly owned subsidiary, University Computing Company (UCC), Wyly provides software products and processing services and sells turnkey minicomputer systems and computer equipment through centers and sales offices in the United States, Canada, Western Europe, and Australia.
- Effective December 31, 1982, the company withdrew from the hardware brokerage business. Automation Center (the international operating arm) acquired a West German supplier of computing services to automobile dealerships. The real growth of the company is in the software division, which had \$48.7 million in revenue in 1982.

WYLY FIVE-YEAR FINANCIAL SUMMARY (\$ thousands, except per share data)

FISCAL YEAR ITEM	1982	1981	1980	1979	1978
Revenue	\$ 140,500	\$ 118,800	\$ 109,000	\$ 87,147	\$ 76,943
• Percent increase from previous year	18%	25%	35%	13%	12%
Net income (loss)	\$ (7,747)	\$ 9,733	\$ 34,911	\$ 6,076	\$ 75,347
• Percent increase (decrease) from previous year	N/A	(72%)	475%	(92%)	1,726%

UNIVERSITY COMPUTING COMPANY

- As of December 1982 UCC had 1,845 employees, of which 700 were in foreign locations, divided as follows:

Digital Systems of Florida, Inc.	145
Software Group	600
Computing Services Division	352
U.K. Computing Services Division	178
Automation Centers International	485
Administrative	<u>85</u>
	1,845

KEY PRODUCTS AND SERVICES

- UCC divides its business into four areas: processing services, software products, turnkey systems, and hardware sales. A three-year summary of revenue by business segment follows:

HISTORICAL GROWTH BY SEGMENT

	1979 (\$ millions)	1982 (\$ millions)	AAGR (percent)
Processing services			
Domestic	\$22.0	\$34.6	16%
Foreign	<u>45.7</u>	<u>33.8</u>	<u>(10%)</u>
Subtotal	\$67.7	\$68.4	-
Software products (domestic)			
Systems	\$11.3	\$26.8	-
Applications	<u>8.1</u>	<u>24.9</u>	<u>-</u>
Subtotal	\$19.4	\$51.7	39%
Turnkey systems			
Domestic	-	\$17.9	-
Foreign	<u>-</u>	<u>2.5</u>	<u>-</u>
Subtotal	-	\$20.4	N/A
Total	<u>\$87.1</u>	<u>\$140.5</u>	<u>17%</u>

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR (percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Processing services	12%	\$ 68	\$ 76	\$ 85	\$ 96	\$107
Software products	25	52	65	81	102	127
Turnkey systems	<u>20</u>	<u>20</u>	<u>24</u>	<u>29</u>	<u>35</u>	<u>42</u>
Total company size	18%	\$140	\$165	\$195	\$233	\$276

INDUSTRY MARKETS

- UCC's products and services are marketed across industry sectors. Major areas of concentration include engineering, consulting and design, petrochemical and energy, electronics and electrical utilities, manufacturing, banking and accounting, construction, and government.

GEOGRAPHIC MARKETS

- Geographic revenue is distributed as follows:

UCC
REVENUE BY GEOGRAPHIC REGION
(\$ millions)

	1981	1980	1979	1978	1977
Revenue					
• U.S.	\$ 109.9	\$ 71.8	\$ 41.4	\$ 36.3	\$ 34.6
• Western Europe	35.1	44.9	45.0	40.1	33.6
• Canada	<u>1.7</u>	<u>1.1</u>	<u>0.7</u>	<u>0.5</u>	<u>0.7</u>
	\$ 146.7	\$ 117.8	\$ 87.1	\$ 76.9	\$ 68.9
Income before tax and extraordinary item					
• U.S.	\$ 11.1	\$ 9.6	\$ 3.5	\$ 2.2	\$ 0.8
• Western Europe	0.9	3.1	5.5	5.9	4.6
• Canada	0.2	0.1	-	-	-
Unallocated corporate expenses	<u>(1.7)</u>	<u>(2.2)</u>	<u>(1.7)</u>	<u>(3.3)</u>	<u>(8.0)</u>
	\$ 10.5	\$ 10.6	\$ 7.3	\$ 4.8	\$ (2.6)

- Revenue is also derived from Mexico, Australia, Japan, South America, South Africa, and the Middle East. Revenue derived from countries other than Western Europe and Canada, primarily from software products, is included with U.S. operations since it is considered U.S. export revenue, not revenue from foreign operations.
- UCC offices are located in 35 U.S. and Canadian cities, 15 European locations, and in Melbourne, Australia.
- Distributors are located in Western Europe, South Africa, Japan, Indonesia, New Zealand, Australia, Israel, and Singapore.

COMPANY HIGHLIGHT

WESTERN GEOPHYSICAL
10001 Richmond Avenue
Houston, TX 77042
(713) 789-9600

Booth B. Strange, President and
Chairman of the Board
Subsidiary of Litton Industries
Total Employees: 2,850
Total Revenue, Fiscal Year End
7/31/82: \$617,000,000*

THE COMPANY

- Western Geophysical (WG) is the world's largest seismic resource exploration company, surveying land and marine areas for gas, oil, and hydrocarbons. All the equipment used by WG is produced by the parent Litton (Litton Resources Systems division). The seismic survey and data processing services are offered to the petroleum industry in the U.S. and abroad (mainly Canada, the U.K., Singapore, and Italy). WG's share of the seismic processing market is estimated at 18%, slightly ahead of Texas Instrument's Geophysical Services Inc. and Geosource. Growth has been at over 20% per annum (total WG revenue including seismic equipment rental) and 20% for the processing service component of that revenue. In 1982 WG had a record revenue year, adding five new seismic vessels.

WESTERN GEOPHYSICAL FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

ITEM \ FISCAL YEAR	1982	1981	1980	1979	1978
Total WG revenue	\$617*	\$597*	\$505*	\$366*	\$282*
• Percent increase from previous year	3%	18%	38%	30%	46%
Processing service revenue	\$122*	\$119*	\$106*	\$ 77*	\$ 59*
• Percent increase from previous year	3%	12%	38%	31%	44%

*INPUT estimate

SERVICE TYPE AND DELIVERY MODE

- Western Geophysical offers batch processing services of seismic data and 3-D/color display of processed data by its proprietary SHADCON plottings. SHADCON is a color-enhanced printing of processed data. In addition, Western has launched a DEC VAX-based seismic data processing system, the

*INPUT estimate

LR53200, which operates floating point systems, programmable array processors, and WG's own pipeline I/O subsystem. This is in response to Geophysical Service's TI-based turnkey system for batch processing of seismic data.

INDUSTRY SECTORS SERVED

- Western offers the petroleum industry both land and marine seismic surveys and subsequent processing of the seismic data. The largest sector is marine data acquisition where WG has a total of 125 exploration crews and vessels. Western revenue is therefore a composite of land and marine exploration each of which is distorted by the high fees charged for the vessels and crews of specialists needed to carry out a survey. Actual processing revenue is only 20% of total declared revenue.

INTERNATIONAL MARKETS SERVED

- The petroleum survey analysis market is a very large one in both Canada and the U.K., and computer processing facilities were recently expanded in both countries. The combined foreign revenue is a constant 30% of all processing revenue and is expanding at an equivalent rate to the U.S. market. This proportion is likely to increase to 25% by 1985 due to the weakness of the U.S. oil exploration market in 1982-1983.

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1979</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Processing services (U.S.)	\$59	\$ 95	17%
Foreign	<u>18</u>	<u>27</u>	<u>27</u>
Total	\$77	\$122	17%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR</u> <u>(percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Batch processing (U.S.)	21%	\$ 92	\$111	\$135	\$163	\$197
Batch processing (international)	25	27	34	42	53	66
Turnkey systems (all)	<u>25</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
Total company size	22%	\$122	\$149	\$182	\$232	\$270

POTENTIAL IMPACT OF ECONOMY

- The economic downturn and the resulting glut of oil has produced a slightly lower demand for further exploration. Well drilling was nevertheless at a high in the U.S. in 1981. But, if current trends continue, with the emphasis on energy saving, fuel economy, and the sudden addition of China's newly found reserves (equivalent to Saudi Arabia's) to an already overburdened oil market, demand for exploration could collapse.

POTENTIAL IMPACT OF COMPETITION

- The seismic survey/analysis business is an extremely competitive environment, one where new approaches to the marketplace can have dramatic impact, particularly in immediacy of response on data acquired. Software is of course a key component and is slow to evolve. Nearly all the vendors have standardized on DEC VAX 11/780 systems, eliminating some of the hardware-based differences.

POTENTIAL IMPACT OF TECHNOLOGY

- The use of satellites to transmit, in real time, the survey data as it is produced to large computer centers (as opposed to the overland transmission of magnetic tapes, as is now used) would be of great value to survey operators since it would allow repositioning of the seismic survey equipment dynamically in response to data analysis. The first vendor to offer this may gain a decisive advantage. Also, turnkey minicomputers are gradually reaching the processing speed/storage capacity necessary to be able to compete for a part of this market.

SUMMARY

- The seismic survey/analysis business is at the tail end of a boom phase and has suffered a downturn of significant proportions. Some of the techniques used can be adapted for mining surveys, offering alternate markets, but some caution with the future of the business is necessary.

COMPANY HIGHLIGHT

XEROX COMPUTER SERVICES
5310 Beethoven Street
Los Angeles, CA 90066
(213) 390-3461

Haig Bazorian, President
Operating Division of Xerox
Information Products Group
Total Employees: 992
Total Revenue, Fiscal Year End
12/31/82: \$73,000,000

THE COMPANY

- Formed in 1970 to provide interactive processing services to the manufacturing, distribution, local government, and utilities markets, XCS has grown to a \$75 million company, \$60 million of which is noncaptive. Entry into the turnkey markets was achieved in January 1981 through the purchase of Praxa Corporation, which sells TK distribution and manufacturing systems based on DEC hardware. Software products will now be licensed to users through the direct sales force out of 21 branch offices, as well as being packaged with TK hardware that includes HP 3000, IBM 4341, and DEC PDP 11/VAX.

XEROX COMPUTER SERVICES FIVE-YEAR FINANCIAL SUMMARY (\$ millions)

FISCAL YEAR ITEM	1982	1981	1980	1979	1978
Revenue	\$73	\$72	\$74.3	\$60	\$46
• Percent increase (decrease from previous year)	1%	(3%)	24%	30%	31%
Net income	-----NOT AVAILABLE-----				
• Percent increase from previous year					

SERVICE TYPE AND DELIVERY MODE

- The processing services, which represent 89% of 1982 revenue, is composed entirely of remote computing services. Only 5% of these are remote batch and 95% are interactive. Now, however, a major thrust is developing in the turnkey systems and software products markets, with license fees ranging from \$150,000 to \$350,000 for the Interactive Accounting System software. XCS commercial users range from single terminal, \$1,500/month customers to 50-terminals, \$50,000/month users. Total client base is estimated at 850 users.

- XCS does not provide the internal data processing services of Xerox Corporation, and Xerox business is obtained in competition with internal facilities and outside competitors.

INDUSTRY SECTORS SERVED

- The targeted industries are assembly and process manufacturing, wholesale distribution, city government, and utilities. Xerox's acquisition activity has focused on expansion of these services rather than diversification into new markets. Discrete manufacturing accounts for 60% of revenue, followed by wholesale distribution with 30%. The principal revenue-producing applications are:
 - Accounts receivable.
 - Cost planning and control.
 - Inventory control.
 - Materials requirement planning.
 - Order entry and invoicing.

INTERNATIONAL MARKETS SERVED

- To date there has been no significant development of international markets other than the servicing of Rank Xerox in The Netherlands through a mini-computer-based node in Ven Ray, The Netherlands, and general services to the U.K. Contribution of international markets to 1981 revenue is expected to be around 2%.

HISTORICAL GROWTH BY SEGMENT

<u>Segment</u>	<u>1979</u> <u>(\$ millions)</u>	<u>1982</u> <u>(\$ millions)</u>	<u>AAGR</u> <u>(percent)</u>
Processing services	\$47.5	\$65.1	11%
Software products	2.5	7.5	45
Other (including turnkey)	<u>10.0</u>	<u>0.4</u>	<u>(66)</u>
Total	\$60.0	\$73.0	7%

PROJECTED GROWTH BY SEGMENT

<u>Segment</u>	<u>AAGR (percent)</u>	<u>Fiscal Year (\$ millions)</u>				
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Processing services	11%	\$65	\$72	\$80	\$ 89	\$ 99
Software products	<u>30</u>	<u>8</u>	<u>10</u>	<u>13</u>	<u>17</u>	<u>22</u>
Total company size	14%	\$73	\$82	\$93	\$106	\$121

POTENTIAL IMPACT OF ECONOMY

- XCS is vulnerable in all its markets: manufacturing, distribution, local government, and even captive in-house processing, all of which are affected by a weak economy and a recessionary trend. For this reason the forecast is for an AAGR of 20% as opposed to earlier years' 23.8%.

POTENTIAL IMPACT OF COMPETITION

- The XCS view of competition is:
 - Small regionally located TK system vendors.
 - Other interactive vendors active in XCS's industry markets such as Martin Marietta and COMSERV.
 - The major manufacturers (IBM, Honeywell, Burroughs) who are offering in-house timesharing-like services on hardware ranging down to mini-computers.

POTENTIAL IMPACT OF TECHNOLOGY

- Xerox Computer Services has suffered in the past from the use of a discontinued line of hardware (Xerox Sigma 9s) and has been converting hardware and software to IBM/IBM-compatible equipment since 1978. It still has a long way to go, however. Thus competitive developments, hardware and software, in the marketplace are hard to respond to. However, this has also been the problem of some of its competitors.

SUMMARY

- XCS has clearly focused on its product strengths and is not dependent on in-house captive business to operate as a viable business entity. The emphasis on software technology and new marketing methods for its products augurs well for the company's future development and health.

APPENDIX A: MICROCOMPUTER SOFTWARE VENDORS

APPENDIX A:

COMPANY NAME: INTERSOFT CORPORATION doing business as
LIFEBOAT ASSOCIATES

HEADQUARTERS: 1651 Third Avenue
New York, NY 10028

PRESIDENT:	Tony Gold	SALES:	\$5 million (1980) \$10 million (1981) \$25 million (1982)
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SALES: \$5 million (1980)
\$10 million (1981)
\$25 million (1982)

TELEPHONE: (212) 860-0300

PRINCIPAL PRODUCT: FPL (Financial Planning Language)

Lifeboat is a mail-order retailer and network of 1500 dealers and distributors of microcomputer software produced by individuals.

INVESTORS: Bessemer Venture Partners and Oak Investment Partners

COMPANY NAME: MICROSOFT

HEADQUARTERS: 400, 108th Avenue, N.E.
Suite 200
Bellevue, WA 98004

PRESIDENT:	William H. Gates	SALES:	\$5 million (1980) \$14 million (1981) \$25 million (1982)
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SALES: \$5 million (1980)
\$14 million (1981)
\$25 million (1982)

TELEPHONE: (206) 454-1315

PRINCIPAL PRODUCT: Microsoft Basic (language) and "soft cards"

INVESTORS: Technology Venture Investors (\$1 million on 9/20/81)

COMPANY NAME: MICROPRO INTERNATIONAL

HEADQUARTERS: 1299 4th Street
San Rafael, CA 94901

PRESIDENT: Seymour I. Rubenstein **SALES:** \$6 million (1981)
\$24 million (1982)

TELEPHONE: (415) 457-8990

PRINCIPAL PRODUCT: CALCSTAR (spreadsheet)
WORDSTAR (word processing)
DATASTAR (file search program)
MAILMERGE
SPELLSTAR

INVESTORS: Adler Group (\$1 million in 3/81) for 25%

COMPANY NAME: VISICORP (Alias Personal Software)

HEADQUARTERS: 2895 Zanker Road
San Jose, CA 95134

CHAIRMAN: Dan Fylstra **SALES:** \$4 million (1980)
\$10 million (1981)
\$20 million (1982)

PRESIDENT: Terry Opdendyk

TELEPHONE: (408) 946-9000

PRINCIPAL PRODUCT: Exclusive distributor of VisiCalc (electronic worksheet)

INVESTORS: Arthur Rock and Venrock Associates (\$0.5 million, 4/80)
Lamoreaux, Glyn & Associates; Fazez Sarofirm; Franklin
Johnson; Newmarket Cazenove; David Karetksy

COMPANY NAME: DIGITAL RESEARCH, INC.

HEADQUARTERS: P.O. Box 579
160 Central Avenue
Pacific Grove, CA 93950

PRESIDENT: Gary A. Kildall **SALES:** \$3.5 million (1980)
\$6.0 million (1981)
\$20 million (1982)

TELEPHONE: (408) 649-3896

PRINCIPAL PRODUCT: CP/M (operating system)

INVESTORS: T.A. Associates; Hambrecht & Quist; Page Mill Partners;
Venrock (8/81)

COMPANY NAME: SOFTWARE PUBLISHING CORPORATION

HEADQUARTERS: 1901 Landings Drive
Mountain View, CA 94043

PRESIDENT: Fred Gibbons **SALES:** \$0.75 million (1981)
\$4.0 million (1982)
\$8.5 (1983 forecast)

TELEPHONE: (415) 962-8910

PRINCIPAL PRODUCT: PFS (Personal Filing System)

INVESTORS: Melchor Venture Management (\$250,000, 5/81)

COMPANY NAME: SORCIM CORPORATION

HEADQUARTERS: 405 Aldo
Santa Clara, CA 95050

PRESIDENT: Bob Robertson **SALES:** \$1.5 million (1981)
\$8.0 million (1982)

TELEPHONE: (408) 727-7634

PRINCIPAL PRODUCT: Makers of SuperCalc (electronic worksheet)

INVESTORS: Melchor Venture Management

COMPANY NAME: ON-LINE CORPORATION
HEADQUARTERS: 1201 San Luis Obispo Avenue
Hayward, CA 94544
PRESIDENT: D. Mandell **SALES:** \$1 million (1981)
Not known (1982)
TELEPHONE: (415) 487-2300
PRINCIPAL PRODUCT: SuperVisiCalc, Report Manager
INVESTORS: Not known

COMPANY NAME: SOFTSEL COMPUTER PRODUCTS INC.
HEADQUARTERS: 8295 South La Cienega Boulevard
Inglewood, CA 90301
PRESIDENT: **SALES:** \$15 million (1981)
\$25 million (1982)
MARKETING MANAGER: Eric Gaer
TELEPHONE: (213) 670-9461
PRINCIPAL PRODUCT: Personal and recreational software distributors to dealers
INVESTORS: Not known

